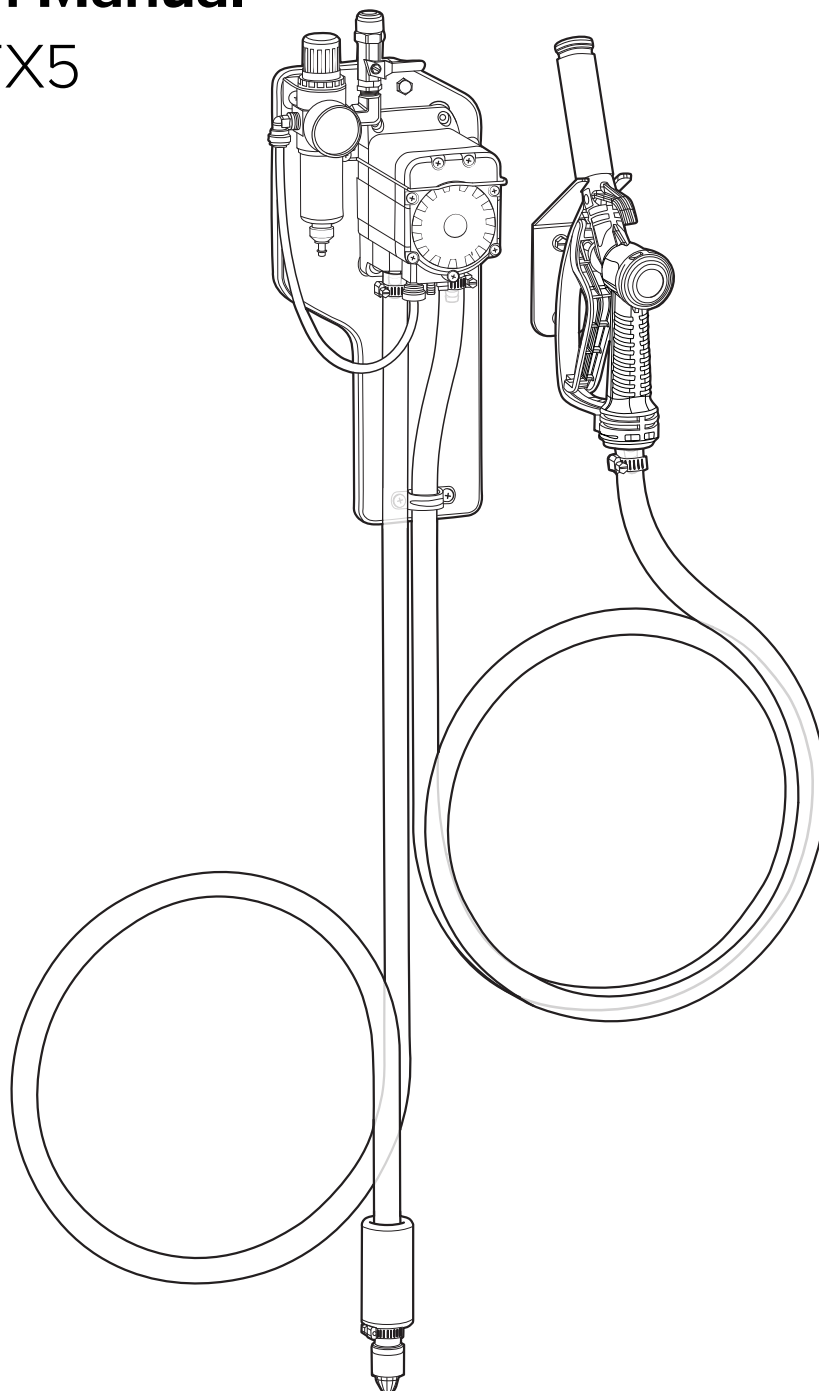


# Chemical Transfer Unit

## Operation Manual

CTX1 - CTX5



READ ALL INSTRUCTIONS BEFORE USING OR  
SERVICING THIS UNIT. KEEP THIS MANUAL IN A  
LOCATION THAT IS READILY AVAILABLE TO USERS  
AND SERVICE TECHNICIANS.

English (Original Instructions)



Scan this code for  
operation manual



# Safety

## **WARNING**

PEOPLE OR OBJECTS CAN BE HURT OR DAMAGED IF THIS UNIT IS NOT USED CORRECTLY!



Failure to read all the instructions before operating the unit may result in personal injury or death from the improper use or the chemical solution. Anyone handling, operating or using the unit must read and understand the instructions in the manual. The buyer assumes all responsibility for safety and proper use in accordance with the instructions.



Using or servicing the unit without appropriate personal protective equipment (PPE) may result in serious injury such as burns, rashes, eye, throat or lung damage and death. Always wear PPE as indicated in the Safety Data Sheet (SDS) when using or servicing the unit. Protect eyes, skin, and lungs against drifting spray.



Chemical solutions may pose a health risk and death if they contact the skin or eyes, are inhaled or swallowed. Always read and follow all chemical safety precautions and handling instructions provided by the chemical manufacturer and the SDS associated with the chemical solution before using the unit.



Pressure within the equipment may cause an unexpected release of the chemical solution and cause serious injury such as burns, rashes, eye damage, throat or lung damage and death. Always depressurize and clean the unit after each use. Release any remaining air pressure by opening the discharge ball valve. Never leave the unit unattended while pressurized.

Using the unit with fluid temperatures above 100°F (37.77°C) may result in scalding, burns, serious injury or death. DO NOT use a solution with a temperature above 100°F (37.77°C).

Operating the unit when damaged or leaking may result in exposure to chemical solutions, serious injury or death. Never use the unit if it is damaged or leaking.

Never point the discharge wand at yourself, another person, or any object you do not want covered in chemical.



Using incoming air pressure exceeding 100 psi (6.9 bar) may result in pressure buildup, explosion, serious injury or death. DO NOT exceed 100 psi (6.9 bar) incoming air pressure when operating the unit.

Use of hydrocarbons and flammable products may result in explosions, fire and serious injury or death. Never use hydrocarbons or flammable products with the unit.



Mixing an alkaline with an acid may result in a chemical reaction. Overheating of the mixture may cause it to splatter caustic compounds or release hazardous fumes, gas and vapors. Always flush the unit with fresh water thoroughly when switching from an alkaline to an acid or an acid to an alkaline.

## NOTICE

Servicing or modifying this unit with parts not listed in this manual may cause the unit to operate improperly. Do not use unauthorized parts when servicing the unit.

Use of an air lubricator before the unit may result in diminished performance and damage to the unit. Do not use an air lubricator before the unit.

Moisture in the air lines will damage the pump and diminish the pump life. The air must be filtered, clean, dry and free of moisture. If needed, install an air dryer before the unit.

## PROTECT THE ENVIRONMENT



Please dispose of packaging materials, old machine components, and hazardous fluids in an environmentally safe way according to local waste disposal regulations

# Product Overview

## Options

	Number of Pumps	Pump Seal Material
CTX	One <b>(1)</b>	Santoprene <b>(S)</b>
	Two <b>(2)</b>	Viton <b>(V)</b>
	Three <b>(3)</b>	Kalrez <b>(K)</b>
	Four <b>(4)</b>	
	Five <b>(5)</b>	

Add the bolded option codes to item number as shown. For Santoprene only units, no option code is needed.

### Examples:

- CTX1K - One pump with Kalrez pump seals
- CTX2VK - One pump with Viton pump seals, and one pump with Kalrez pump seals
- CTX3V - All three pumps with Viton pump seals
- CTX4SSKK - Two pumps with Santoprene pump seals, two pumps with Kalrez pump seals
- CTX5 - All five pumps with Santoprene pump seals

## Requirements

Compressed air requirements	20-80 psi (1.4-5.5 bar) with 2 cfm (56.6 l/min)
Liquid temperature range	40-100°F (4.4-37°C)
Chemical compatibility	Chemical products used with this equipment must be formulated for this type of application and compatible with unit materials and pump seals. For more information on chemical compatibility, consult the manufacturer or SDS for your product or contact our customer service department.

## Specifications

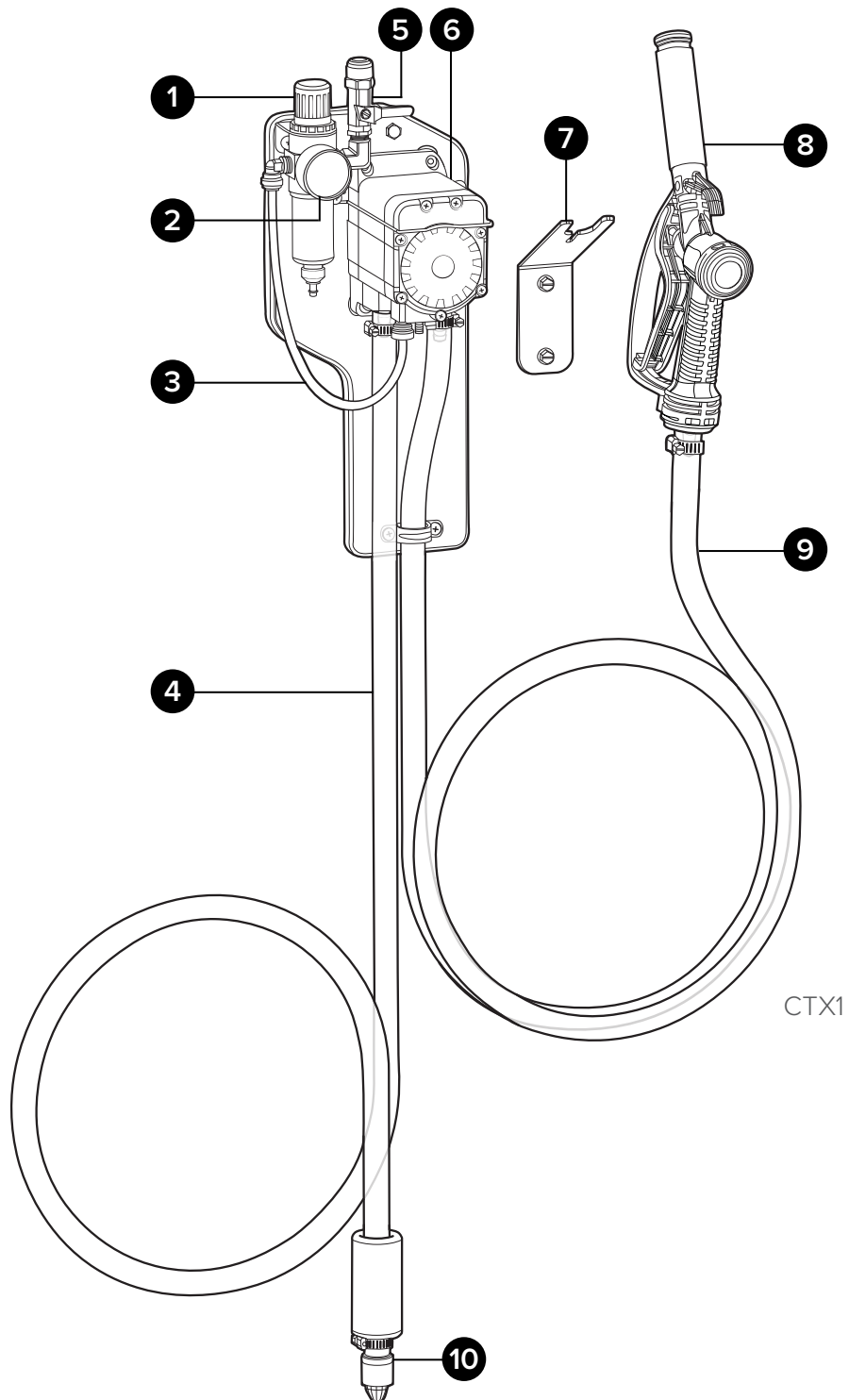
Power type	Compressed air
Number of products unit can draw from	One product per pump
Suction line length/diameter	8 ft. (2.4 m) hose with ½ in. (12.7 mm) inside diameter
Discharge hose length/diameter	8 ft. (2.4 m) hose, with ½ in. (12.7 mm) inside diameter
Discharge wand/tip type	Polypropylene fill gun with ½ in. hose barb and Hastelloy spring
Flow rate*	3.5 gal/min (13.2 l/min) per pump
Pump seals	Santoprene, Viton, or Kalrez

\*Flow rates given are based on chemical with viscosity of water and factory air pressure settings.

# Product Components

Get to know the CTX1 components that you will need to use, adjust or assemble.

## Chemical Transfer Unit • One pump

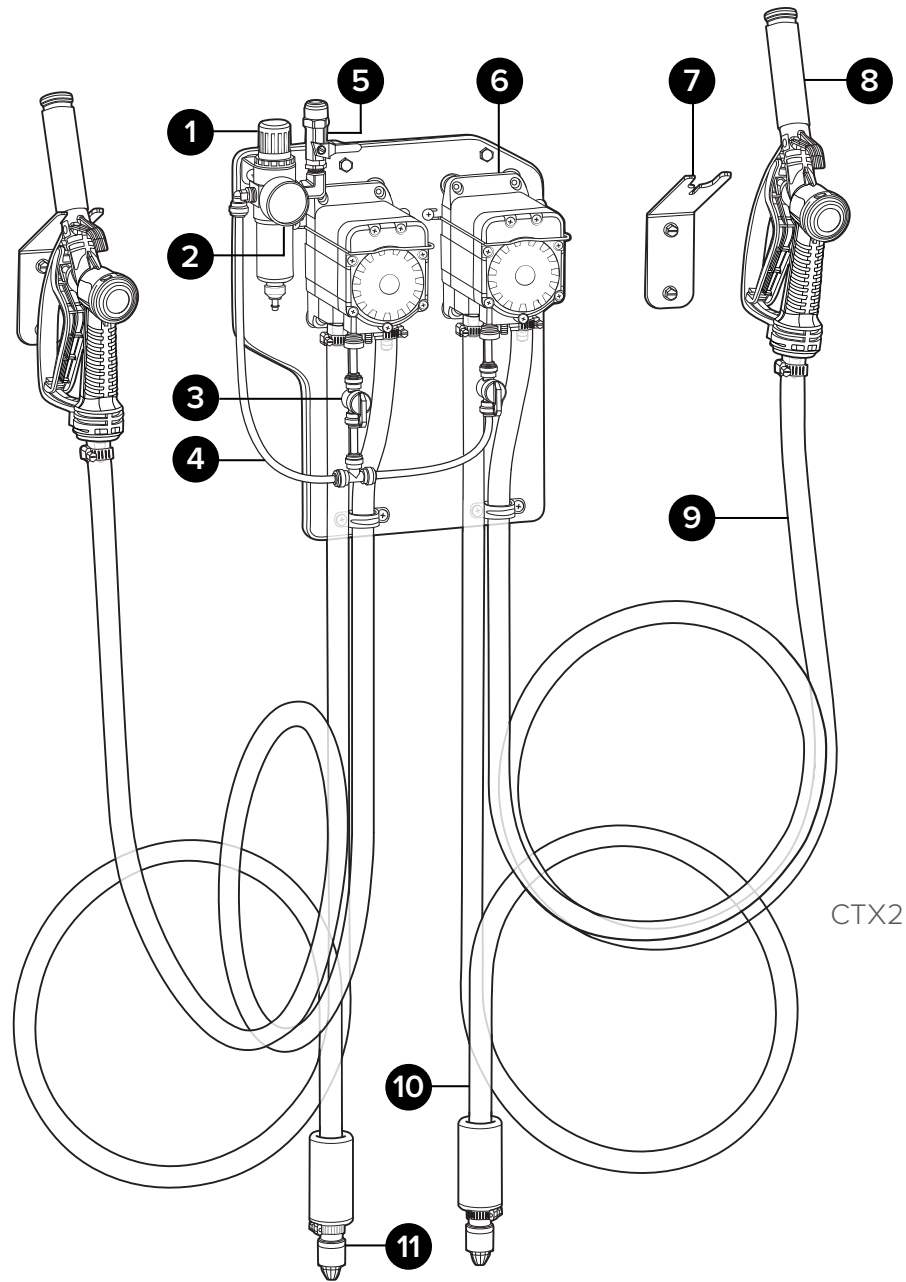


1. Air regulator
2. Air pressure gauge
3. Air line
4. Suction Hose
5. Air inlet valve
6. Quick-change pump
7. Wand bracket
8. Poly fill gun
9. Discharge hose
10. Suction valve

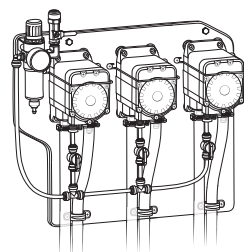
# Product Components

Get to know the CTX2 - CTX5 components that you will need to use, adjust or assemble.

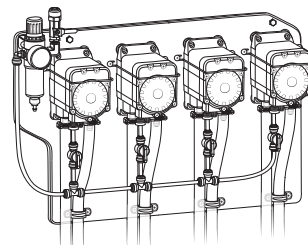
## Chemical Transfer Unit • Two pump - Five pump



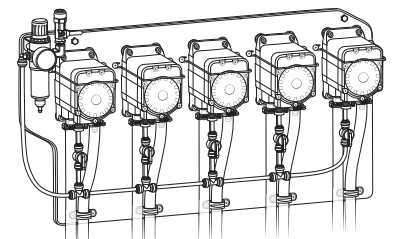
- 1. Air regulator
- 2. Air pressure gauge
- 3. Quick-fit shut off valve
- 4. Air line
- 5. Air inlet valve
- 6. Quick-change pump
- 7. Wand bracket
- 8. Poly fill gun
- 9. Discharge hose
- 10. Suction hose
- 11. Suction valve



CTX3



CTX4



CTX5

## Installation Instructions

1. Remove components from packaging.
2. Select desired area to mount the unit.
3. Mount the unit to the wall using the longer screws and plastic anchors provided in the parts package.

**NOTE:** To drill holes for the plastic anchors, use a  $\frac{5}{16}$  inch drill bit.

4. If desired, mount the wand bracket using the screws and plastic anchors provided in the parts package.

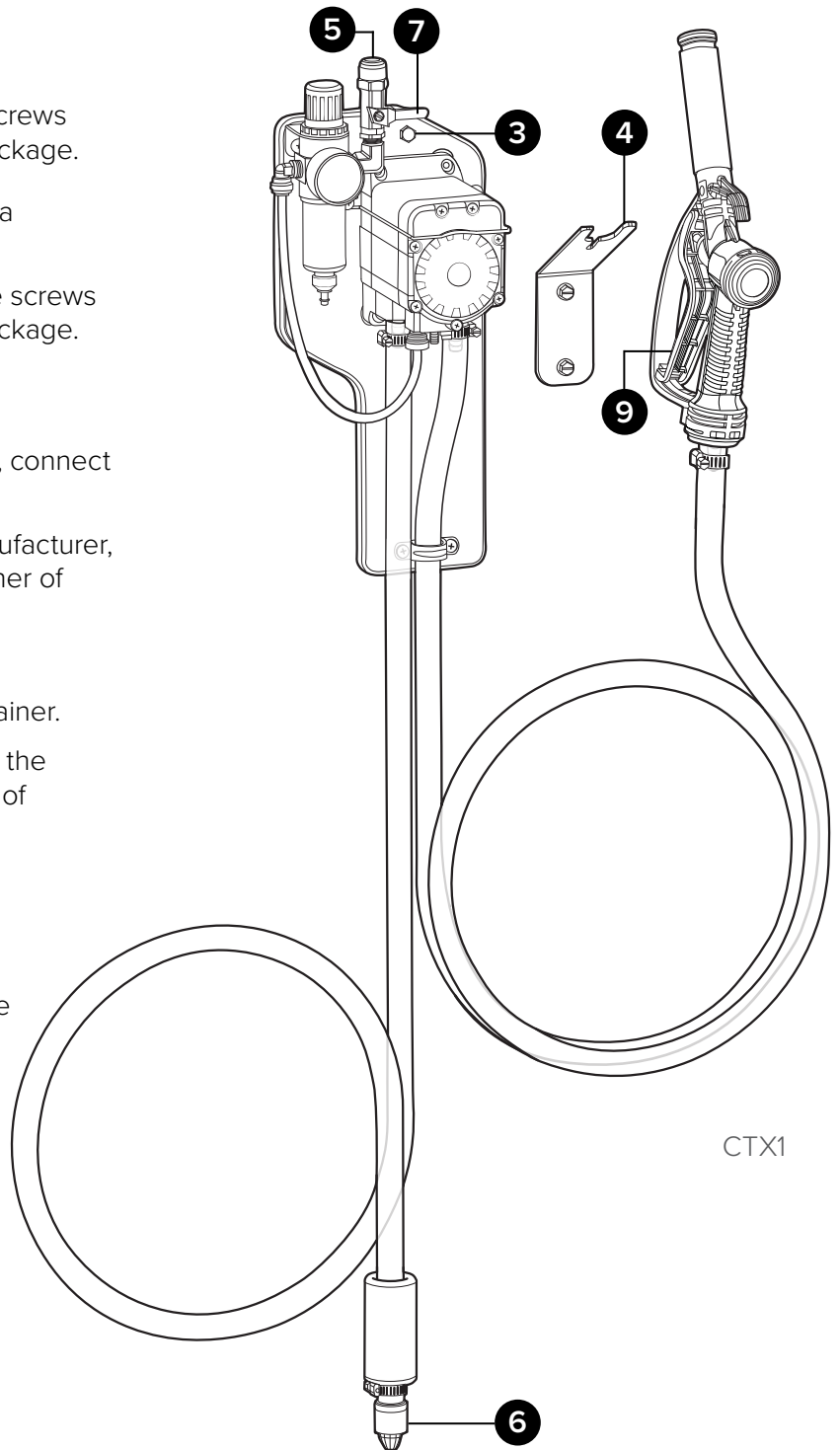
## Operating Instructions

5. With the air inlet valve in the closed position, connect  $\frac{3}{8}$  inch tubing air line to the air inlet quick-fit.
6. Following all instructions from chemical manufacturer, place the chemical suction line into a container of chemical solution.
7. Open the air inlet valve to allow air flow.
8. Place the poly fill gun into an approved container.
9. Activate unit by pulling the trigger handle on the poly fill gun. Release trigger to stop the flow of product.
10. Close the air inlet valve to stop air flow.

## After Use Instructions

**NOTE:** To ensure safety, always depressurize the unit when not in use and prior to disassembly or maintenance.

11. Shut off the air supply to the unit by closing the air inlet valve, and removing air line.
12. Pull the trigger handle on the fill gun to relieve any pressure remaining in the unit.
13. Release trigger handle after all pressure has been relieved from the unit.



# Using your unit

CTX2 - CTX5

## Installation Instructions

1. Remove components from packaging.
2. Select desired area to mount the unit.
3. Mount the unit to the wall using the longer screws and plastic anchors provided in the parts package.

**NOTE:** To drill holes for the plastic anchors, use a  $\frac{5}{16}$  inch drill bit.

4. If desired, mount the wand brackets using the screws and plastic anchors provided in the parts package.

## Operating Instructions

5. With the air inlet valve in the closed position, connect  $\frac{3}{8}$  inch tubing air line to the air inlet quick-fit.
6. Following all instructions from chemical manufacturer, place the chemical suction line into a container of chemical solution.
7. Open the air inlet valve to allow air flow.
8. For units with 2 or more pumps, verify the quick-fit shut off valves are open.
9. Place poly fill gun into an approved container.
10. Activate the unit by pulling the trigger handle on the poly fill gun. Release the trigger to stop the flow of product.

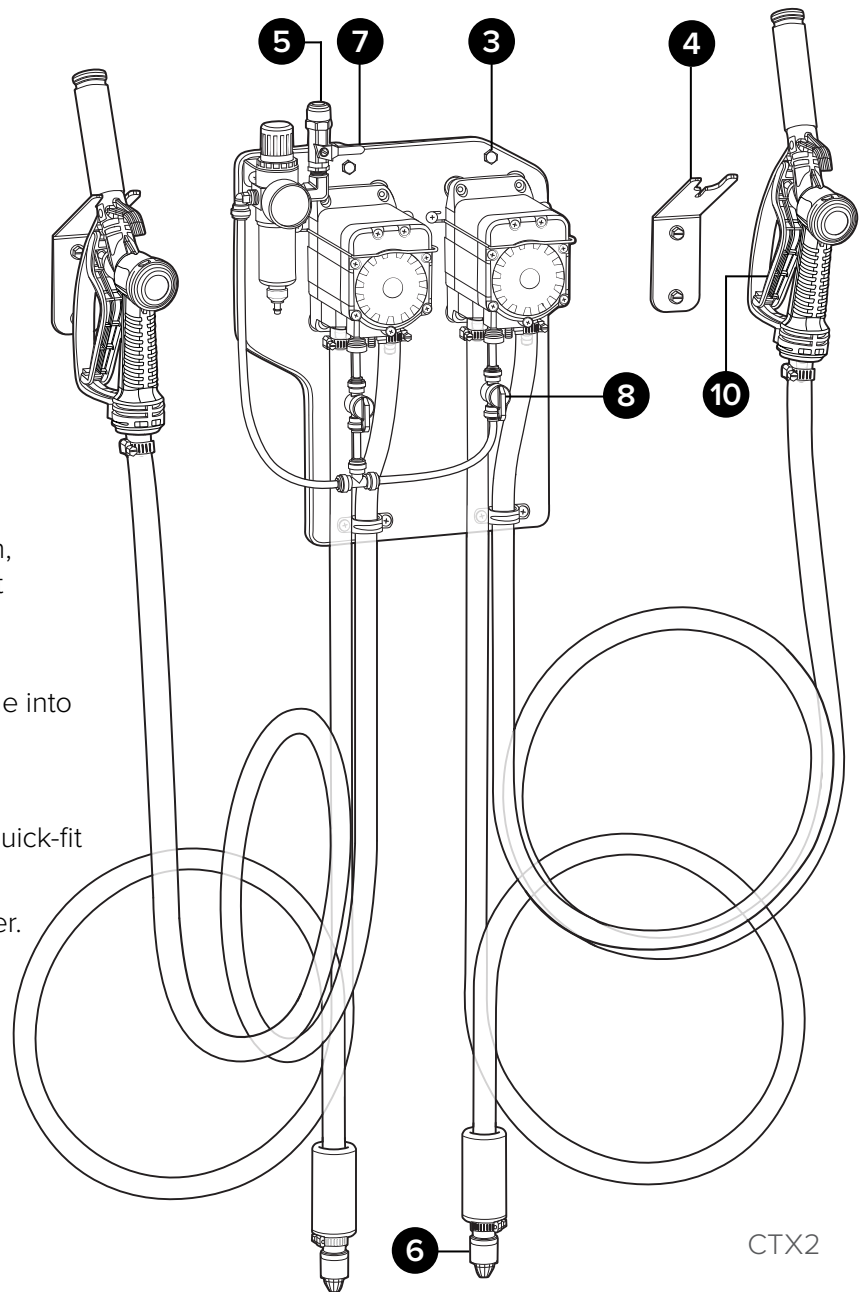
**NOTE:** For safe and effective operation, it is recommended to only activate one pump at a time.

11. Close the air inlet valve to stop air flow.

## After Use Instructions

**NOTE:** To ensure safety, always depressurize the unit when not in use and prior to disassembly or maintenance.

12. Shut off the air supply to the unit by closing the air inlet valve and removing air line.
13. Pull the trigger handle on the poly fill guns to relieve any pressure remaining in the unit.
14. Release trigger handle after all pressure has been relieved from the unit.





# Maintenance

## WARNING

Performing any maintenance with the unit pressurized, and connected to the air supply may result in serious injury or death. Always ensure that the unit has been depressurized, and disconnected from the air supply before conducting any maintenance. Servicing or modifying this unit with parts not listed in this manual may cause the unit to operate improperly. Do not use unauthorized parts when servicing the unit.

## Maintaining Your Unit

To keep your unit operating properly, periodically perform the following maintenance procedures:

- Inspect the pump for wear and leaks.
  - Inspect all hoses for leaks or excessive wear. Make sure all hose clamps are in good condition and properly secured.
  - Replace the filter located within the air regulator as needed. Clean by unthreading the air regulator bowl from the air regulator.
  - Check the suction line and strainer for debris. Clean as needed.
  - Drain your air compressor tank on a regular basis to help extend pump life. An air source with a high moisture content will accelerate pump wear.
- Note:** If your air source has a high moisture content, install a water separator.

## Servicing Your Unit

To service your unit, refer to the service manual which includes:

- Troubleshooting procedures.
- Detailed parts breakdowns and illustrations.
- Part numbers of serviceable components and assemblies.



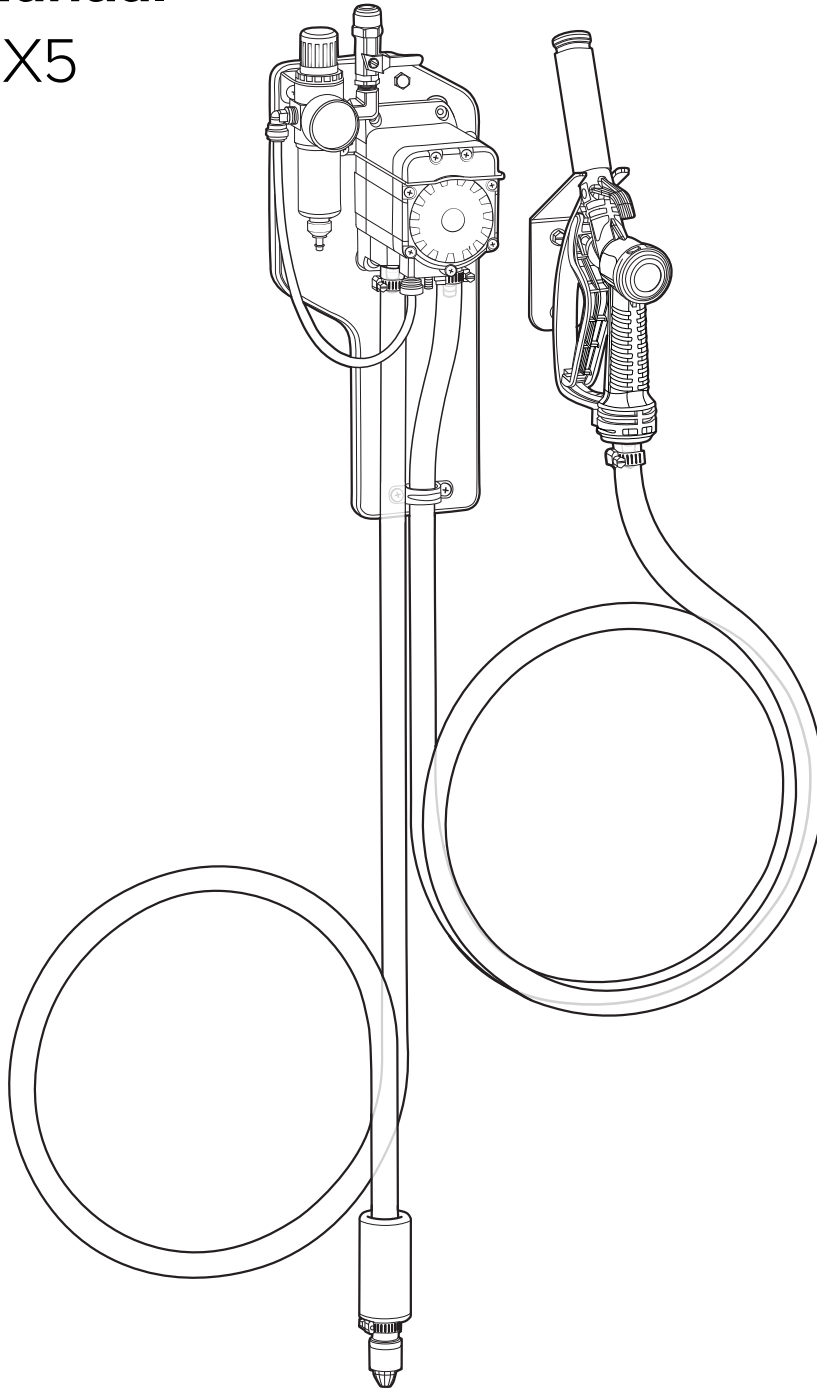
Scan this code for  
service manual



# Chemical Transfer Unit

## Service Manual

CTX1 - CTX5



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SERVICING THIS UNIT. KEEP THIS MANUAL IN A  
LOCATION THAT IS READILY AVAILABLE TO USERS  
AND SERVICE TECHNICIANS.

English (Original Instructions)



Scan this code for  
service manual



# Safety

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Chemical solutions may pose a health risk and death if they contact the skin or eyes, are inhaled or swallowed. Always read and follow all chemical safety precautions and handling instructions provided by the chemical manufacturer and the SDS associated with the chemical solution before using the unit.



Pressure within the equipment may cause an unexpected release of the chemical solution and cause serious injury such as burns, rashes, eye damage, throat or lung damage and death. Always depressurize and clean the unit after each use. Release any remaining air pressure by opening the discharge ball valve. Never leave the unit unattended while pressurized.

Using the unit with fluid temperatures above 100°F (37.77°C) may result in scalding, burns, serious injury or death. DO NOT use a solution with a temperature above 100°F (37.77°C).

Operating the unit when damaged or leaking may result in exposure to chemical solutions, serious injury or death. Never use the unit if it is damaged or leaking.

Never point the discharge wand at yourself, another person, or any object you do not want covered in chemical.



Using incoming air pressure exceeding 100 psi (6.9 bar) may result in pressure buildup, explosion, serious injury or death. DO NOT exceed 100 psi (6.9 bar) incoming air pressure when operating the unit.

Use of hydrocarbons and flammable products may result in explosions, fire and serious injury or death. Never use hydrocarbons or flammable products with the unit.



Mixing an alkaline with an acid may result in a chemical reaction. Overheating of the mixture may cause it to splatter caustic compounds or release hazardous fumes, gas and vapors. Always flush the unit with fresh water thoroughly when switching from an alkaline to an acid or an acid to an alkaline.

## NOTICE

Servicing or modifying this unit with parts not listed in this manual may cause the unit to operate improperly. Do not use unauthorized parts when servicing the unit.

Use of an air lubricator before the unit may result in diminished performance and damage to the unit. Do not use an air lubricator before the unit.

Moisture in the air lines will damage the pump and diminish the pump life. The air must be filtered, clean, dry and free of moisture. If needed, install an air dryer before the unit.

## PROTECT THE ENVIRONMENT



Please dispose of packaging materials, old machine components, and hazardous fluids in an environmentally safe way according to local waste disposal regulations.

# Service Guide

## ⚠ WARNING

Performing any maintenance with the unit pressurized and connected to the air supply may result in serious injury or death. Always ensure that the unit has been depressurized and disconnected from the air supply before conducting any maintenance. Servicing or modifying this unit with parts not listed in this manual may cause the unit to operate improperly. Do not use unauthorized parts when servicing the unit.

## Maintaining Your Unit

To keep your unit operating properly, periodically perform the following maintenance procedures:

- Inspect the pump for wear and leaks.
  - Inspect all hoses for leaks or excessive wear. Make sure all hose clamps are in good condition and properly secured.
  - Replace the filter located within the air regulator as needed. Clean by unthreading the air regulator bowl from the air regulator.
  - Check the suction line and strainer for debris. Clean as needed.
  - Drain your air compressor tank on a regular basis to help extend pump life. An air source with a high moisture content will accelerate pump wear.
- Note:** If your air source has a high moisture content, install a water separator to the air fitting.

## Servicing Your Unit

Most repairs on the unit can be performed with the following tools:

- Crescent wrench
- $\frac{7}{16}$  in. (11 mm) open-ended wrench
- Flat head screwdriver
- #2 Phillips head screwdriver
- Thread seal tape
- Hose cutters
- Knife

# Troubleshooting Your Unit

If your unit is not operating properly, try using these troubleshooting tips:

Issue	Solution
Air regulator bowl or air filter has debris such as water, oil, or rust particles	<ul style="list-style-type: none"> <li>• Clean by unthreading the air regulator bowl from the air regulator.</li> </ul>
Pump is cycling faster than normal	<ul style="list-style-type: none"> <li>• Verify product is getting to the pump with these steps:               <ol style="list-style-type: none"> <li>1. Inspect suction line foot valve for buildup.</li> <li>2. Examine the suction hose for holes or cracks.</li> <li>3. Ensure chemical suction line is fully submerged in the chemical jug.</li> </ol> </li> <li>• If these items are confirmed, the pump may need to be replaced.</li> </ul>
Pump is cycling slower than normal	<ul style="list-style-type: none"> <li>• Verify that the unit is receiving proper air supply. Air supply should read at 50 psi (3.4 bar).</li> <li>• Restriction on the outlet side of the unit may cause issues. Inspect outlet hose and fittings for build up. Clean or replace as needed.</li> <li>• Confirm air inlet valve is open completely.</li> <li>• Pump may need to be replaced.</li> </ul>
Air passes through the pump without cycling	<ul style="list-style-type: none"> <li>• The pump needs to be replaced.</li> </ul>
The unit operates at a reduced pressure	<ul style="list-style-type: none"> <li>• Check suction line and strainer for debris or damage. Clean or replace as needed. To prevent damage to the unit, the strainer must always be used.</li> <li>• Check the air compressor supplying the unit. If the pressure is less than 40 psi (2.8 bar), turn off the unit until the compressor can catch up.</li> <li>• If the air supply is 50 psi (3.4 bar) or above, check the air gauge, which should read near 50 psi (3.4 bar). If the air gauge reads more or less than 50 psi (3.4 bar), adjust the pressure by turning the knob on the top of the air regulator.</li> </ul>

# Chemical Transfer Unit

CTX1

## CTX1:

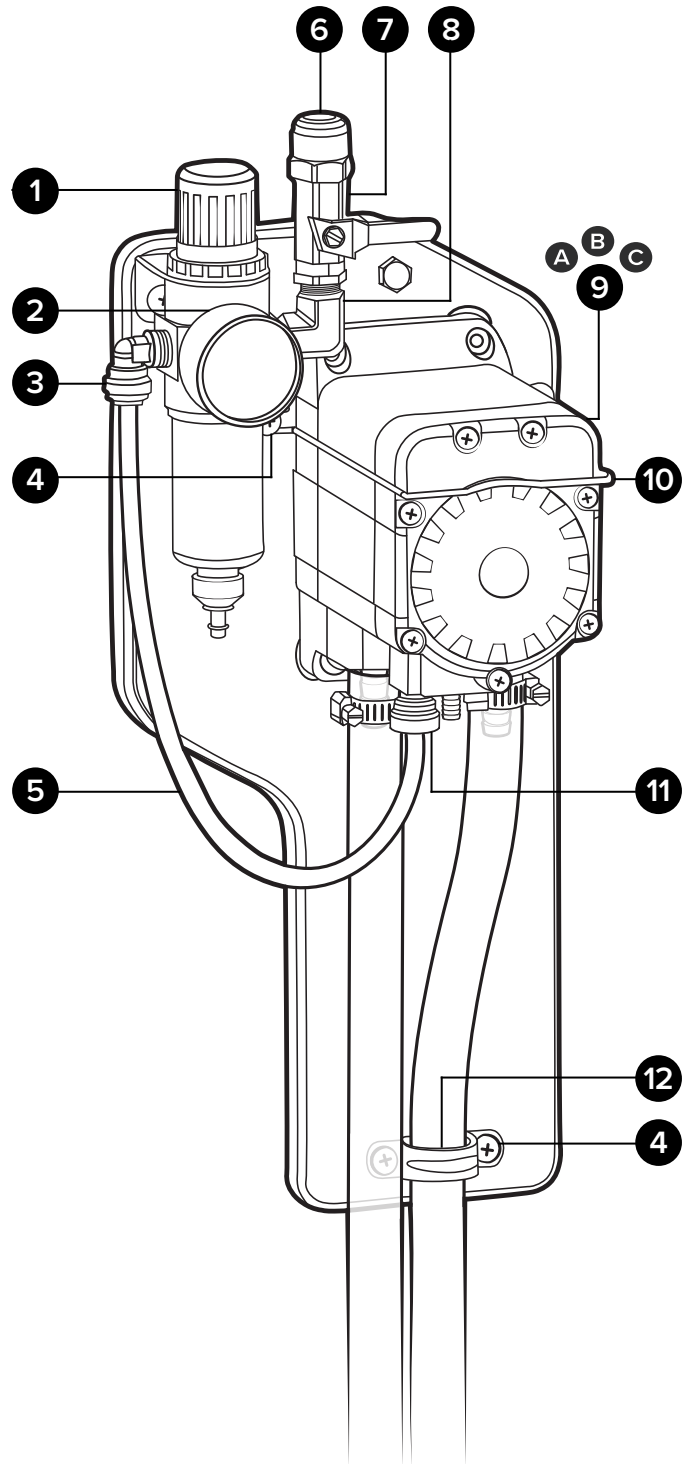
Chemical transfer unit - exposed pump - one product - Santoprene pump

## Additional pump options:

CTX1K: Kalrez pump

CTX1V: Viton pump

Item number	Description
1 R25	Air regulator - two ¼ in. FPT ports - two ⅛ in. FPT ports - includes filter and bowl
2 AG100	Air gauge - ⅛ in. NPT - 100 PSI dry model
3 QFEL14P	Fixed elbow ¼ in. tube x ¼ in. MPT - polypropylene
4 S1012-HL	10-16 x ½ in. screw - stainless - hi lo
5 TB14BL-PU	¼ in. od blue polyurethane tubing - available per ft.
6 QF1438	Quick fit - ¼ MPT x ⅜ od tube - polypropylene
7 BVB14	Air inlet valve - ¼ in. FPT x ¼ in. FPT
8 SEL14M	Stainless elbow ¼ in. MPT x ¼ in. MPT
9 A P56	Pump with Santoprene seals - includes hose barbs, air fitting, and exhaust barb
B P56K	Pump with Kalrez seals - includes hose barbs, air fitting, and exhaust barb
C P56V	Pump with Viton seals - includes hose barbs, air fitting, and exhaust barb
10 BRKT-P56	Pump bracket - stainless steel
11 QF14PAF	Quick fit - ¼ MPT pump air fitting
12 CLMP12	Clamp for ½ in. hose - PVC



# Chemical Transfer Unit

CTX2 - CTX5

## CTX2:

Chemical transfer unit - exposed pump - two product - Santoprene pumps

### Additional pump variation examples:

CTX2VK: One pump Viton, one pump Kalrez pump seals

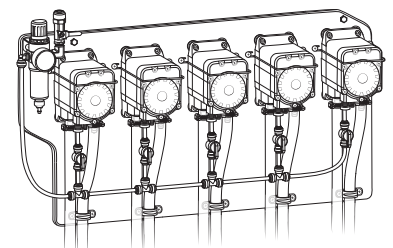
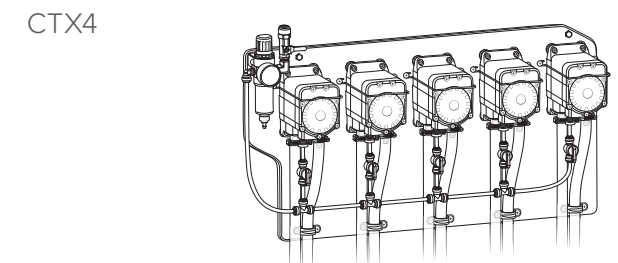
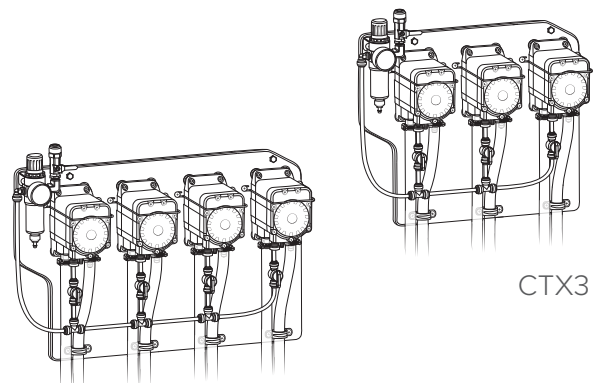
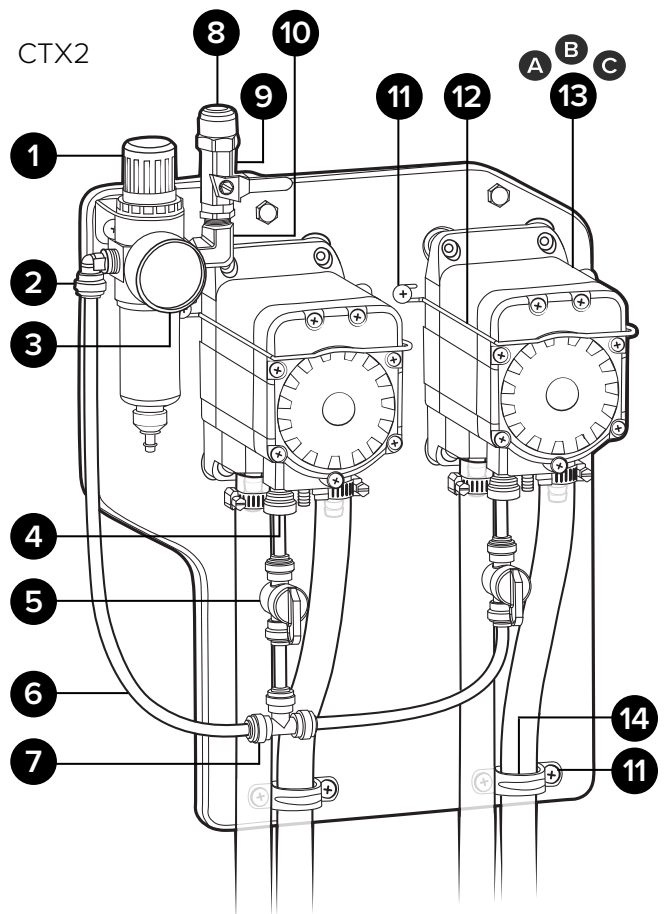
CTX3V: Three pumps with Viton pump seals

CTX4SSKK: Two pumps Santoprene, two pumps Kalrez

CTX5: Five pumps with Santoprene pump seals

**Note:** No option code needed for Santoprene only units

Item number	Description
1 R25	Air regulator - two ¼ in. FPT ports - two ½ in. FPT ports - includes filter and bowl
2 QFEL14P	Fixed elbow ¼ in. tube x ¼ in. MPT - polypropylene
3 AG100	Air gauge - ⅛ in. NPT - 100 PSI dry model
4 QF14PAF	Quick fit - ¼ MPT pump air fitting
5 QFSOV14	Shut off valve ¼ in. tube - polypropylene
6 TB14BL-PU	¼ in. od blue polyurethane tubing - available per ft.
7 QFT14	Union tee ¼ in. tube - polypropylene
8 QF1438	Quick fit - ¼ MPT x ⅜ od tube - polypropylene
9 BVB14	Air inlet valve - ¼ in. FPT x ¼ in. FPT
10 SEL14M	Stainless elbow ¼ in. MPT x ¼ in. MPT
11 S1012-HL	10-16 x ½ in. screw - stainless - hi lo
12 BRKT-P56	Pump bracket - stainless steel
13 A P56	Pump with Santoprene seals - includes hose barbs, air fitting, and exhaust barb
B P56K	Pump with Kalrez seals - includes hose barbs, air fitting, and exhaust barb
C P56V	Pump with Viton seals - includes hose barbs, air fitting, and exhaust barb
14 CLMP12	Clamp for ½ in. hose - PVC



# Suction Assembly

## SHA12CL-8-CB:

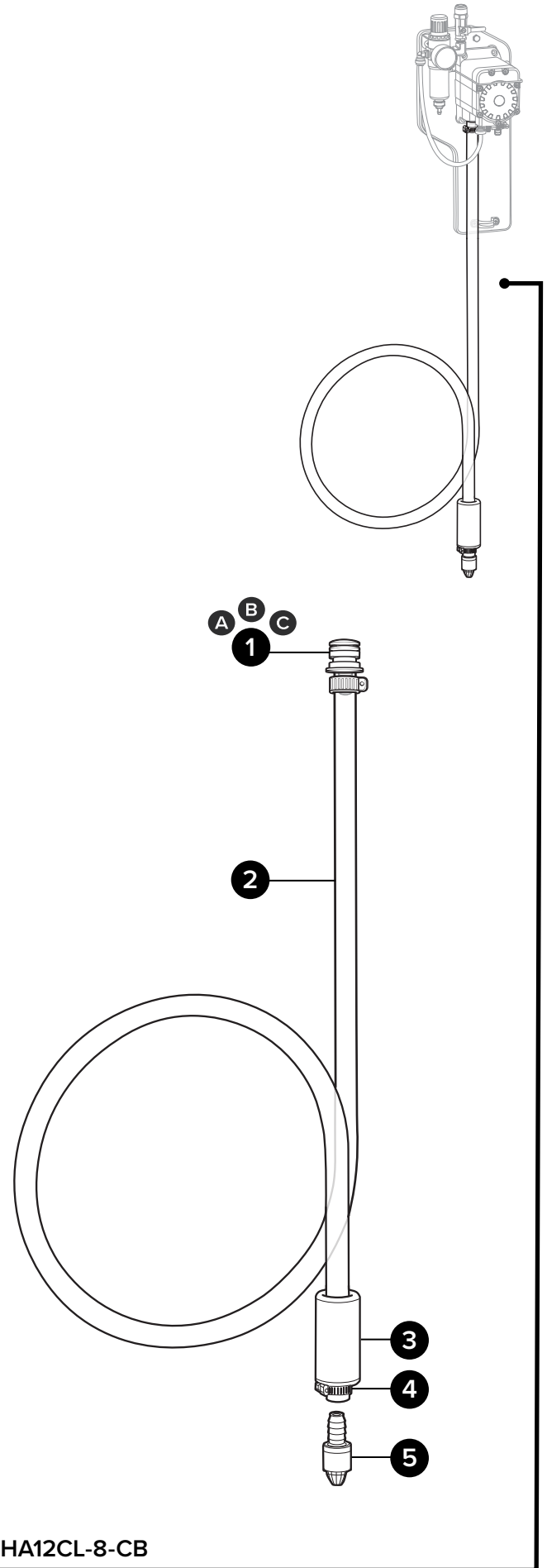
Suction assembly for chemical transfer units - includes suction valve, hose, weight, and pump hose barb - for Santoprene pump

### Additional suction assembly options:

SHA12CL-8-CBK: Kalrez pump

SHA12CL-8-CBV: Viton pump

Item number	Description
1	<b>A</b> HB5638 Hose barb for P56 pump - EPDM o-ring
	<b>B</b> HB5638K Hose barb for P56K pump - Kalrez o-ring
	<b>C</b> HB5638V Hose barb for P56V pump - Viton o-ring
2	H12CL-CB ½ in. id clear braid hose - PVC - available per ft.
3	SHW3 3 in. long coated weight
4	SSC12 Stainless screw band clamp for ½ in. hose
5	FV2 Foot valve - Viton - black



SHA12CL-8-CB



# Discharge Assembly

## BRKTA-PFG:

Bracket assembly for poly fill gun - includes bolt, anchor, and bracket

Item number	Description
1 WMS14A	#14 x 1 ¼ in. wall mount screw anchor - plastic - 5/16 in. drill size
2 BRKT-PFG	Mounting bracket for poly fill gun
3 WMS14	#14 x 1 ¼ in. wall mount screw - stainless - hex head slotted

## PFGA-WH-H12CL-8-CB-HB56:

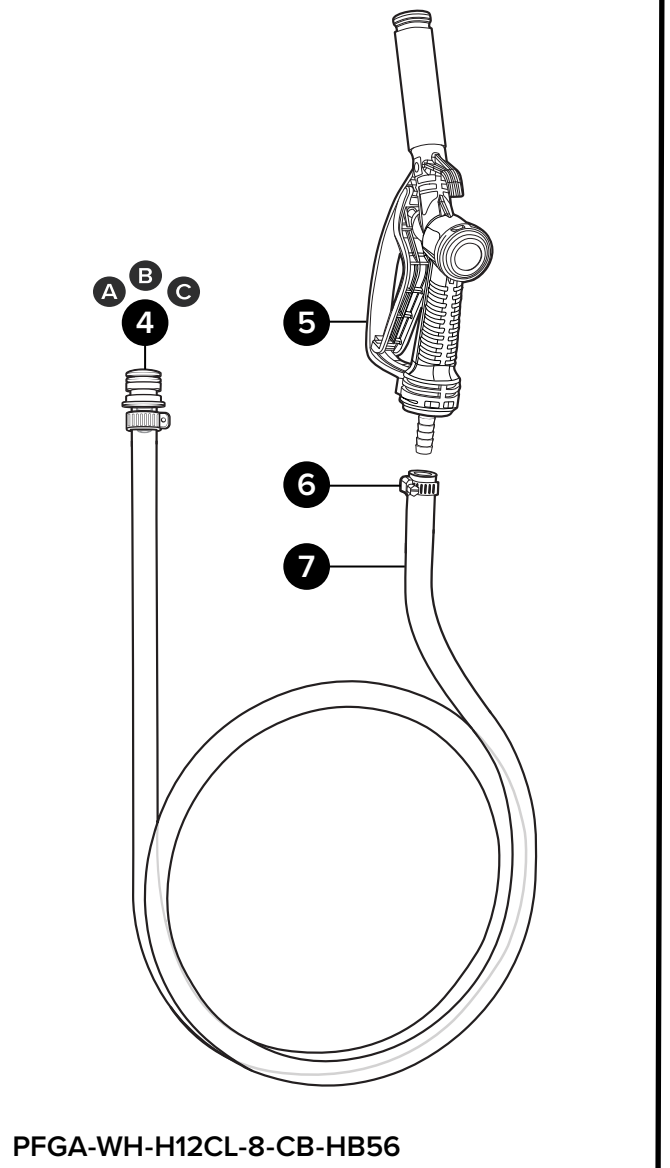
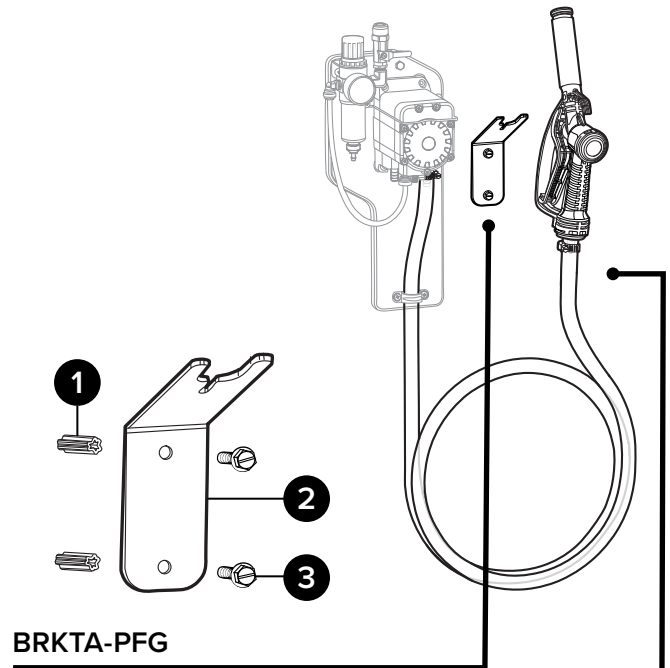
Discharge assembly - includes fill gun, hose, hose barb, and screw band clamps - for Santoprene pump

### Additional discharge assembly options:

PFGA-WH-H12CL-8-CB-HB56K: Kalrez pump

PFGA-WH-H12CL-8-CB-HB56V: Viton pump

Item number	Description
4 A HB5638	Hose barb for P56 pump - EPDM o-ring
B HB5638K	Hose barb for P56K pump - Kalrez o-ring
C HB5638V	Hose barb for P56V pump - Viton o-ring
5 PFG12HB	White fill gun - polypropylene - ½ in. hose barb - Hastelloy spring - Viton seals
6 SSC12	Stainless screw band clamp for ½ in. hose
7 H12CL-CB	½ in. id clear braid hose - PVC - available per ft.

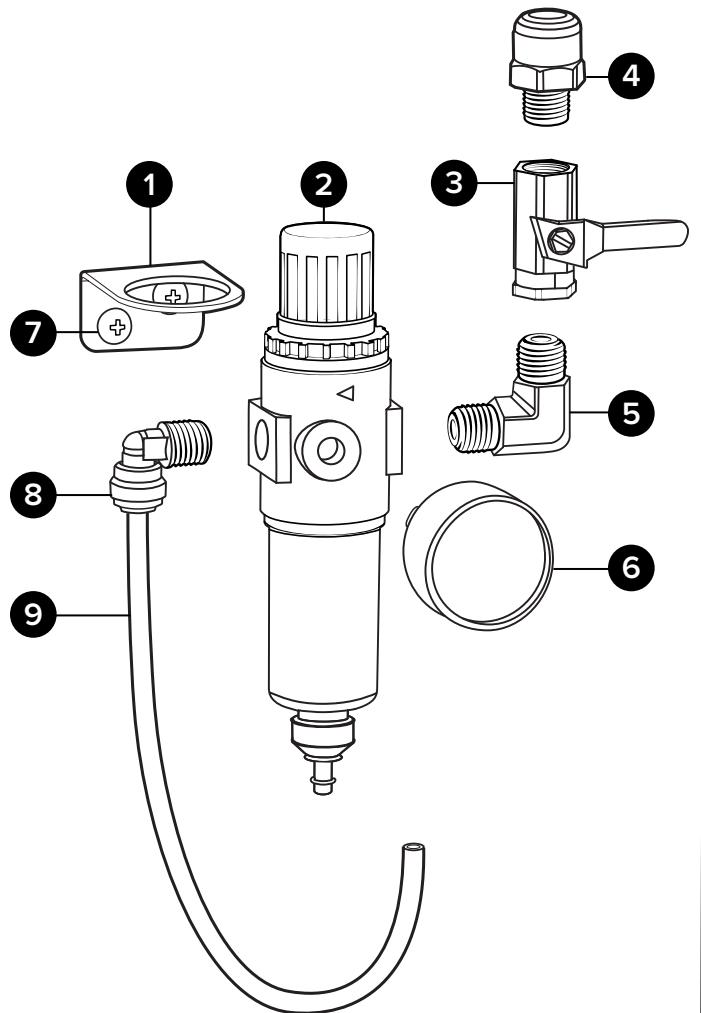
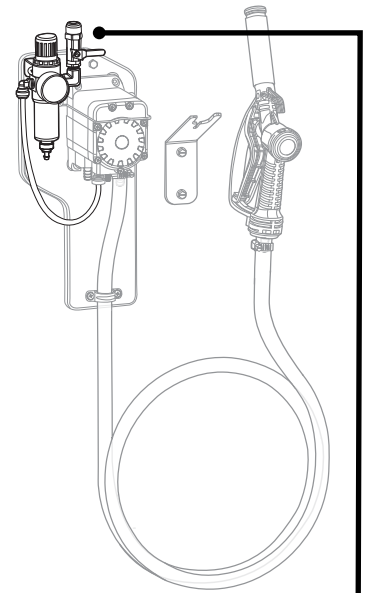


# Regulator Assembly

## RGA-R25-CTX:

Air regulator assembly for chemical transfer units - includes air gauge, quick fit, hose, air inlet valve, bracket, and elbows

Item number	Description	
1	REGBRKT	A33-82 bracket, MTG
2	R25	Air regulator - two ¼ in. FPT ports - two ½ in. FPT ports - includes filter and bowl
3	BVB14	Air inlet valve - ¼ in. FPT x ¼ in. FPT
4	QF1438	Quick fit - ¼ MPT x ¾ od tube - polypropylene
5	SEL14M	Stainless elbow ¼ in. MPT x ¼ in. MPT
6	AG100	Air gauge - ½ in. NPT - 100 PSI dry model
7	S1012-HL	10-16 x ½ in. screw - stainless - hi lo
8	QFEL14P	Fixed elbow ¼ in. tube x ¼ in. MPT - polypropylene
9	TB14BL-PU	¼ in. od blue polyurethane tubing - available per ft.



RGA-R25-CTX