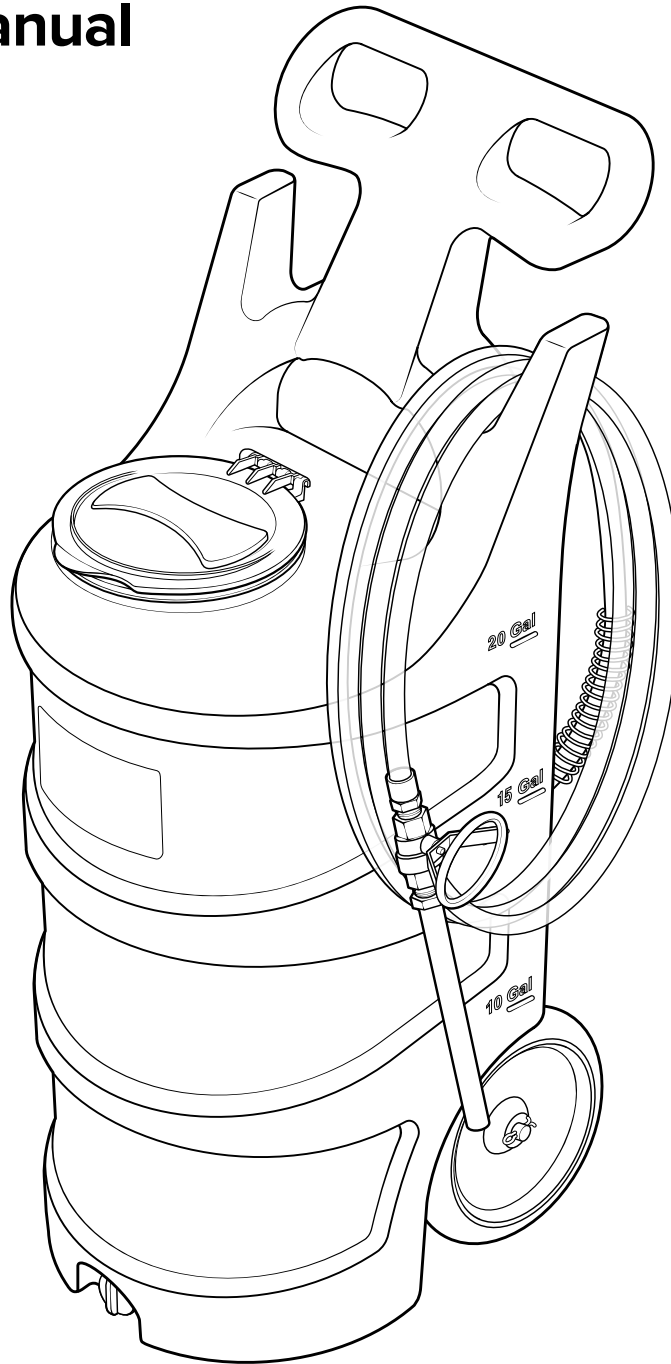


20 Gallon Transfer Unit

Operation Manual

TU-20N



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

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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. Never leave the unit unattended while pressurized.

Using the unit with fluid temperatures above 100°F (37.8°C) may result in scalding, burns, serious injury or death. DO NOT use a solution with a temperature above 100°F (37.8°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

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 (4.4-37.8°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

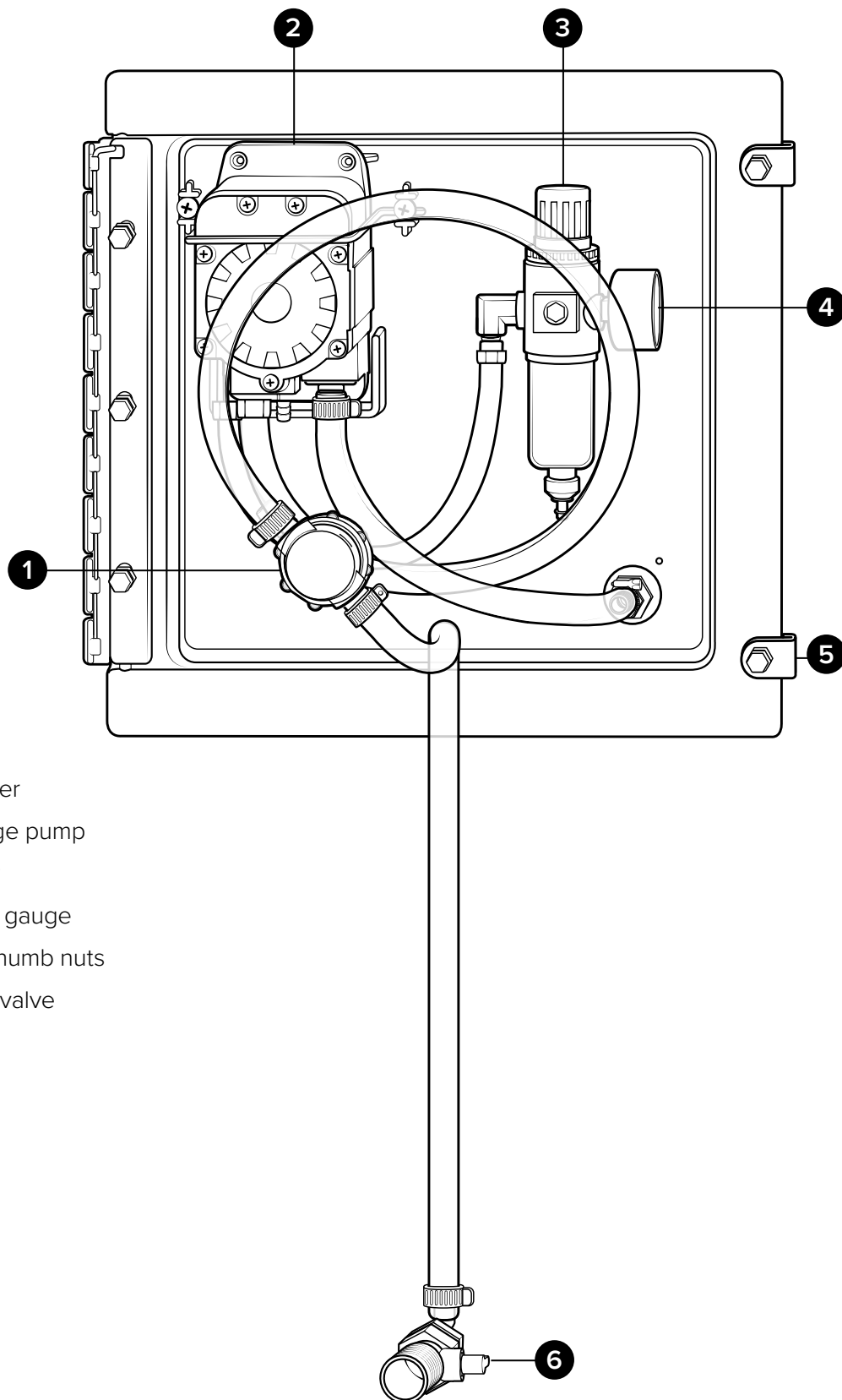
| | |
|---------------------------------------|---|
| Power type | Compressed air |
| Chemical pickup type | Draws from pre-mixed or concentrated solution |
| Number of products unit can draw from | One product |
| Suction line diameter | ½ in. (12.7 mm) inside diameter |
| Capacity | 20 gallons (75.7 liters) |
| Discharge line length/diameter | 15 ft. (4.6 m) hose, with ½ in. (12.7 mm) inside diameter |
| Discharge wand/tip type | 10 in. (25.4 cm) stainless steel wand with zero tip and ball valve 27 in. (68.7) stainless steel curved wand with zero tip and ball valves Polypropylene fill gun with ½ in. hose barb and Hastelloy spring |
| Flow rate* | 3.5 gal/min (13.2 l/min) |
| Pump seals | Santoprene, Viton, or Kalrez |
| Wheel type | Two 10 inch (25.4 cm) non-marking wheels |

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

Product Components

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

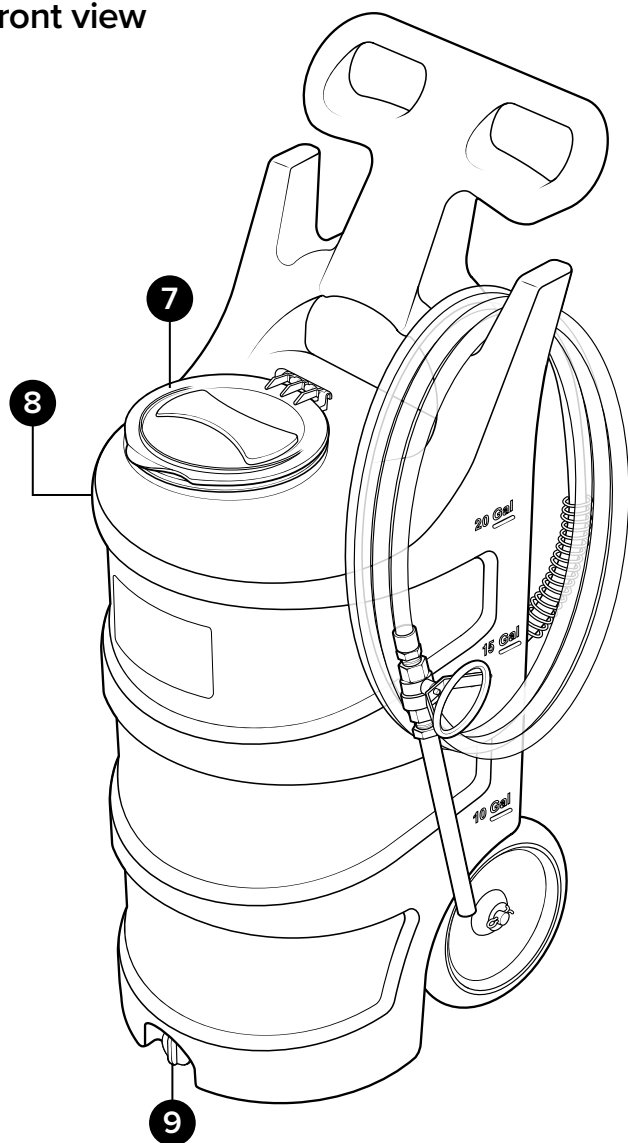
Back plate assembly • Inside view



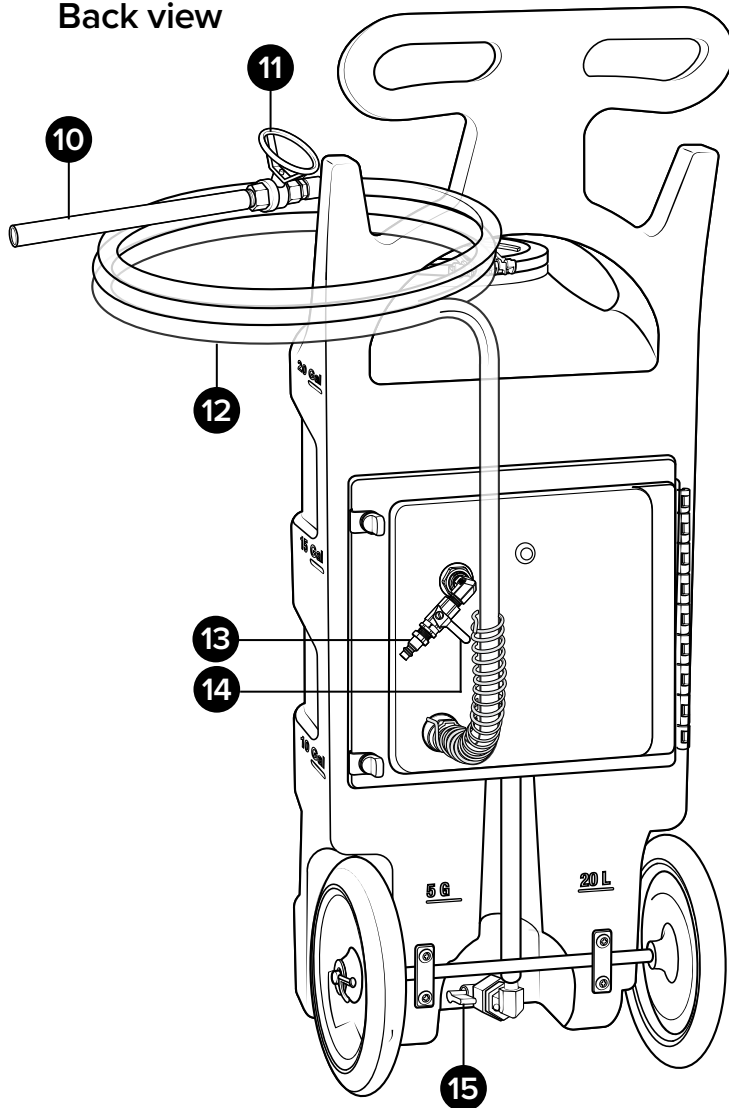
1. In-line strainer
2. Quick-change pump
3. Air regulator
4. Air pressure gauge
5. Back plate thumb nuts
6. Suction line valve

Tank Assembly

Front view

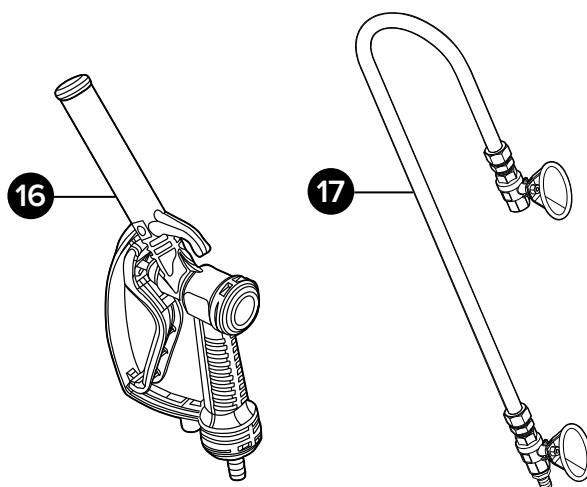


Back view



- 7. Hinged lid
- 8. Solution tank
- 9. Drain plug
- 10. Discharge wand
- 11. Discharge ball valve
- 12. Discharge hose
- 13. Air fitting
- 14. Air inlet valve
- 15. Suction line valve
- 16. Poly fill gun
- 17. Curved wand

Additional wand options



Using your unit

Operating Instructions

1. Verify drain plug is securely closed.
2. Following all instructions from chemical manufacturer, fill tank with pre-mixed or concentrated solution.
3. Verify suction line valve at base of the suction line is open, allowing fluid into the suction line.
4. With the air inlet valve and discharge ball valve in the closed position, plug an air line into the air fitting.
5. Open air inlet valve to allow air flow.

NOTE: Transfer instructions will depend on configuration.

6. Polypropylene Fill Gun:

- a. Pull trigger handle on poly fill gun to begin transfer. Release trigger handle to stop.

7. Stainless Wand:

- b. Slowly open the discharge ball valve to begin.
- c. Close discharge ball valve to stop.

8. Curved Stainless Wand:

- d. Open top discharge ball valve and position wand.
- e. Slowly open bottom discharge ball valve to begin.
- f. Slowly close bottom discharge ball valve to stop.
- g. Close top discharge ball valve and remove wand.

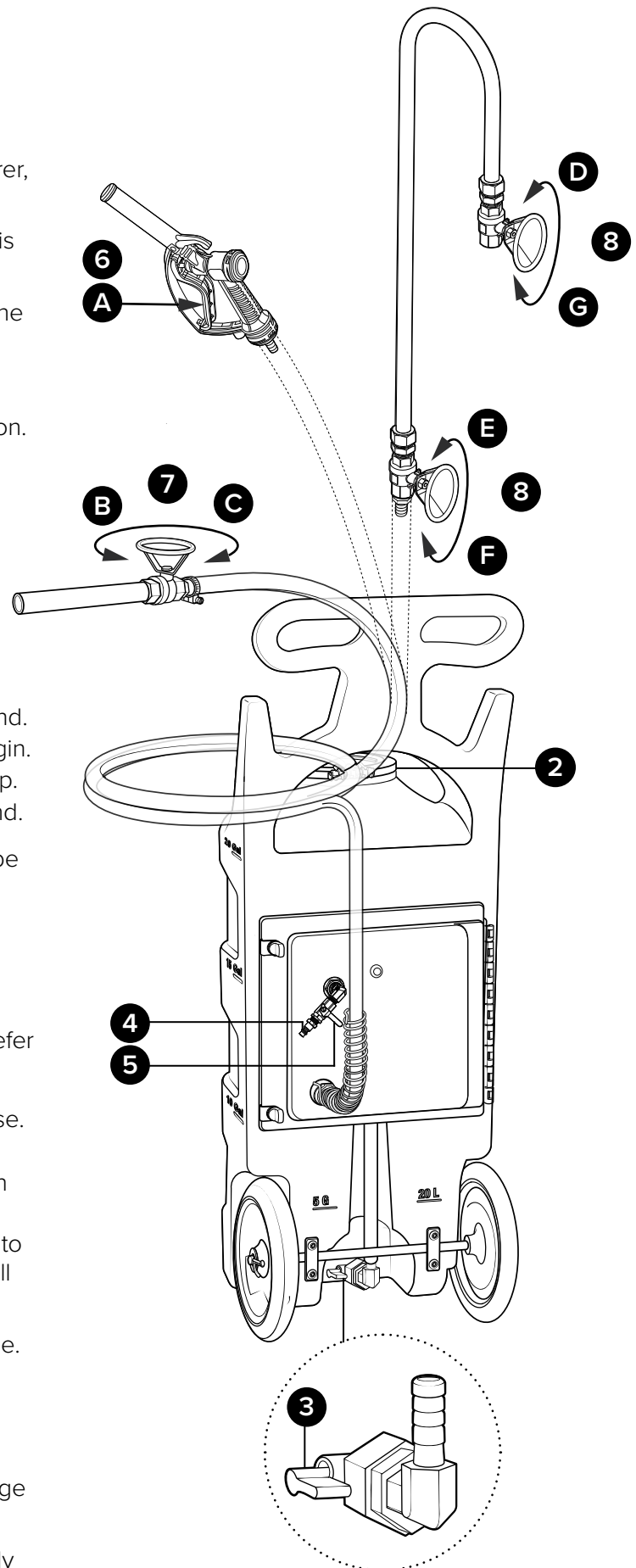
NOTE: Use caution when removing wand, there may be remaining solution inside that could spill.

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

After Use Instructions

NOTE: For proper handling and disposal procedures refer to chemical SDS.

10. Solution should be removed from unit after each use. This can be done in two ways:
 - a. Unthread drain plug from front of tank and drain solution into an approved location.
 - b. Place discharge wand into approved container to transfer remaining solution. Activate unit until all solution has been flushed from the system.
11. After solution has been removed, disconnect air line.
12. Open discharge ball valve or pull trigger handle to relieve remaining pressure.
13. Close ball valve or release trigger handle after all pressure has been relieved. Store unit with discharge ball valve and air inlet valve closed.
14. Before using unit with another chemistry, thoroughly flush with water.



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 to the air fitting on the backplate.

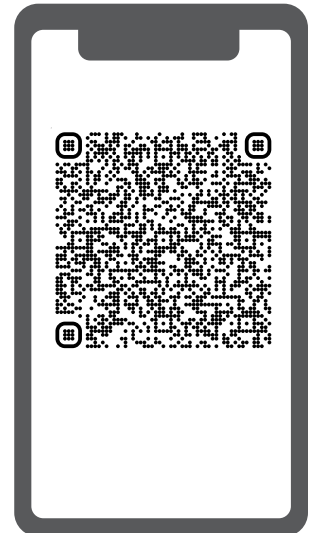
Servicing Your Unit

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.



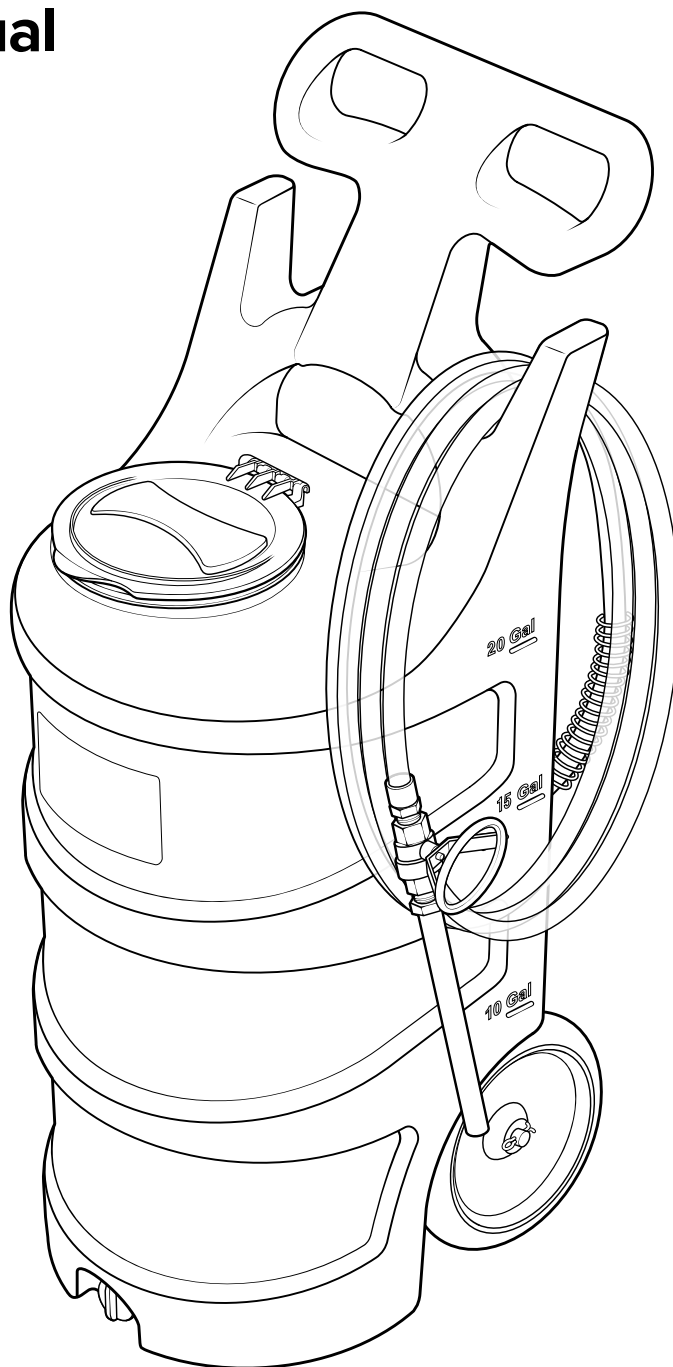
Scan this code for
service manual



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Service Guide

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 - 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 on the backplate. See Page 8 for more details. (Back plate assembly)

Servicing Your Unit

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

- Crescent wrench (2x)
- $\frac{7}{16}$ in. (11 mm) open-ended wrench
- Flat head screwdriver
- Thread seal tape
- #2 Phillips head screwdriver
- #3 Phillips head screwdriver
- 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"> • Clean by unthreading the air regulator bowl from the air regulator. |
| Pump is cycling faster than normal | <ul style="list-style-type: none"> • Verify product is getting to the pump with these steps: <ol style="list-style-type: none"> 1. Make sure the tank has chemical solution in it. 2. Ensure the suction line valve is open completely. 3. Inspect suction line and strainer for debris or damage. • If these steps are confirmed, the pump may need to be replaced. |
| Pump is cycling slower than normal | <ul style="list-style-type: none"> • Verify there is no obstruction on the outlet side of system with these steps: <ol style="list-style-type: none"> 1. Inspect discharge hose assembly for build up. 2. Verify unit is supplied with proper air supply. • If these steps are confirmed, the pump may need to be replaced. |
| Air passes through the pump without cycling | <ul style="list-style-type: none"> • The pump needs to be replaced. |
| The unit operates at a reduced pressure | <ul style="list-style-type: none"> • 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. • 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. • 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. |

Tank Assembly

Front view

TNKA-20N-TU-BK:
20 gallon natural tank assembly for transfer units - black*
lid - includes drain plug, wheels, suction valve, and
backplate thumb nuts

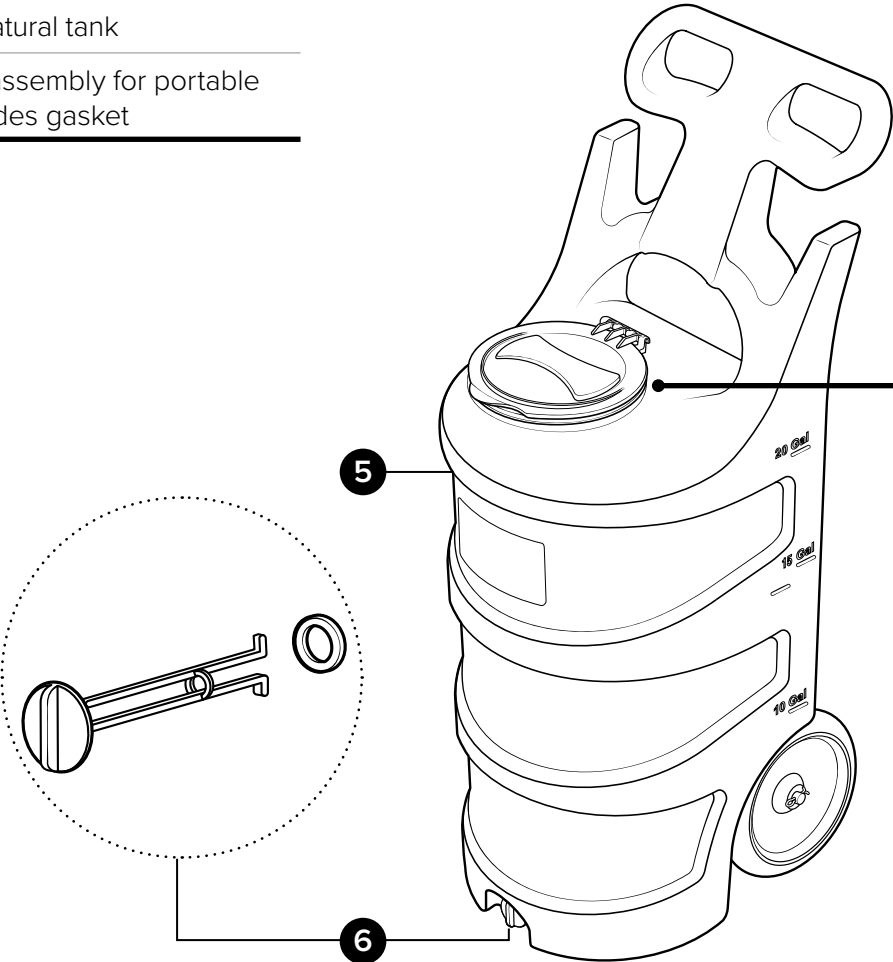
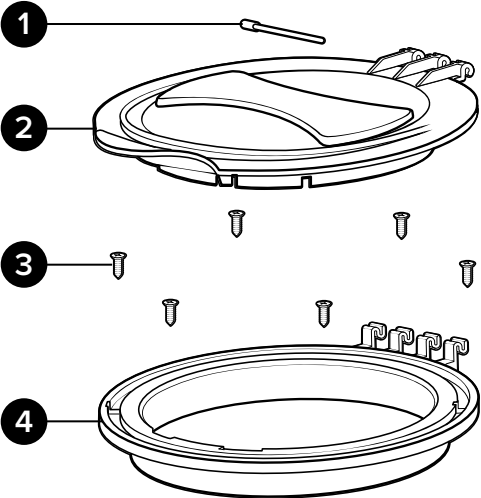
LDA-7BK:
Lid assembly - includes 7 in. black* lid, lid flange, hinge pin,
and mounting screws

| Item number | | Description |
|-------------|-------------|---|
| 1 | LD-PIN | Hinge pin for 7 in. lid and flange |
| 2 | LD-7BK-LID | 7 in. cap - polyethylene - black* |
| 3 | S812-FH | #8 x ½ in. screw - stainless - flat head Phillips |
| 4 | LD-7BK-FLNG | 7 in. lid flange - polyethylene - black* |

* Additional colors available, see datasheet for options.

| Item number | | Description |
|-------------|---------|--|
| 5 | TNK-20N | 20 gallon natural tank |
| 6 | DPA | Drain plug assembly for portable units - includes gasket |

LDA-7BK



TNKA-20N-TU-BK:

20 gallon natural tank assembly for transfer units - black*
lid - includes drain plug, wheels, suction valve, and
backplate thumb nuts

BPTNA:

Back plate thumb nut assembly - includes bolt, thumb nut,
and tether

| Item number | | Description |
|-------------|---------------|---|
| 1 | BST1420118-VS | ¼-20 x 1 ½ in. set bolt - stainless - Vibra-Seal |
| 2 | TN1420 | ¼-20 thumb nut - brass insert - assembled with tether |

VLVA-PVCV34-TU:

Suction valve assembly for transfer units - includes valve,
bushing, and elbow

| Item number | | Description |
|-------------|------------|--|
| 3 | PVCV34FM | PVC valve ¾ in. FPT x ¾ in. MPT |
| 4 | HHPB3412 | Hex head poly bushing ¾ MPT x ½ FPT |
| 5 | HBSSEL1212 | Stainless hose barb ½ MPT x ½ barb elbow |

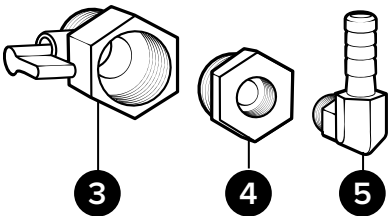
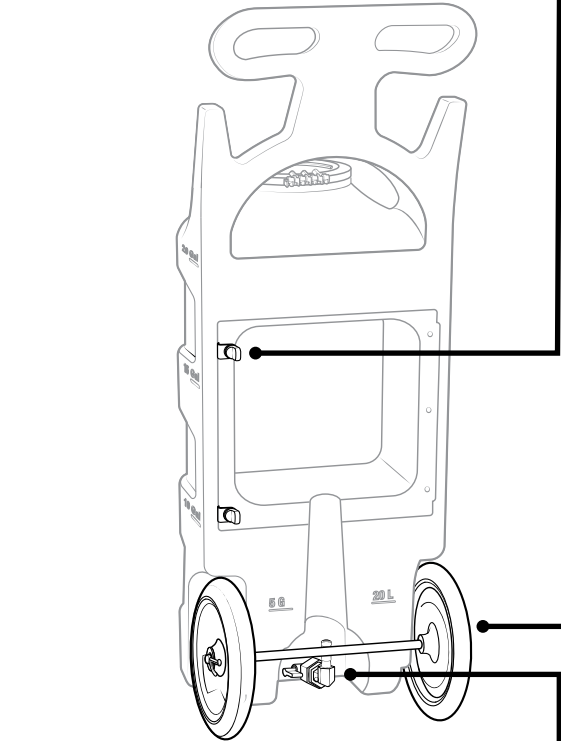
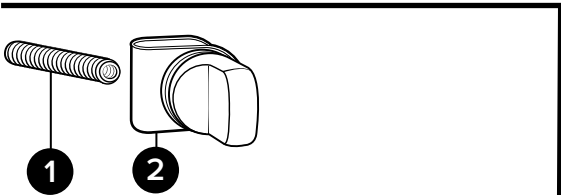
WHLA-AXL15:

10 in. wheel assembly - includes 15 in. axle, axle plate, bolts,
washers, and cotter pins

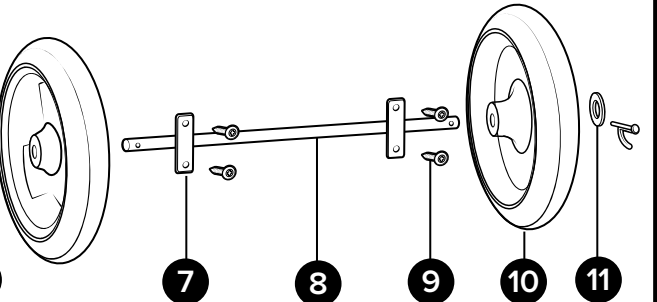
| Item number | | Description |
|-------------|------------|---|
| 6 | COT | Cotter pin - stainless - ⅛ in. x 1 in. |
| 7 | PLSS-AXL | Axle plate - stainless - 2.5 in. x 1 in. - 2 holes |
| 8 | AXL15 | Axle - stainless - 0.625 dia. x 15.45 in. |
| 9 | B142012-VS | ¼-20 x ½ in. bolt - stainless - truss head Phillips - Vibra-Seal |
| 10 | W10 | Wheel - non-marking - 10 in. |
| 11 | FW58 | Flat washer for ⅝ in. pipe - stainless - 0.687 id x 1.5 od x 0.07 thk |

Back view

BPTNA



VLVA-PVCV34-TU



WHLA-AXL15

Back Plate Assembly

Inside view

PA-TU12:

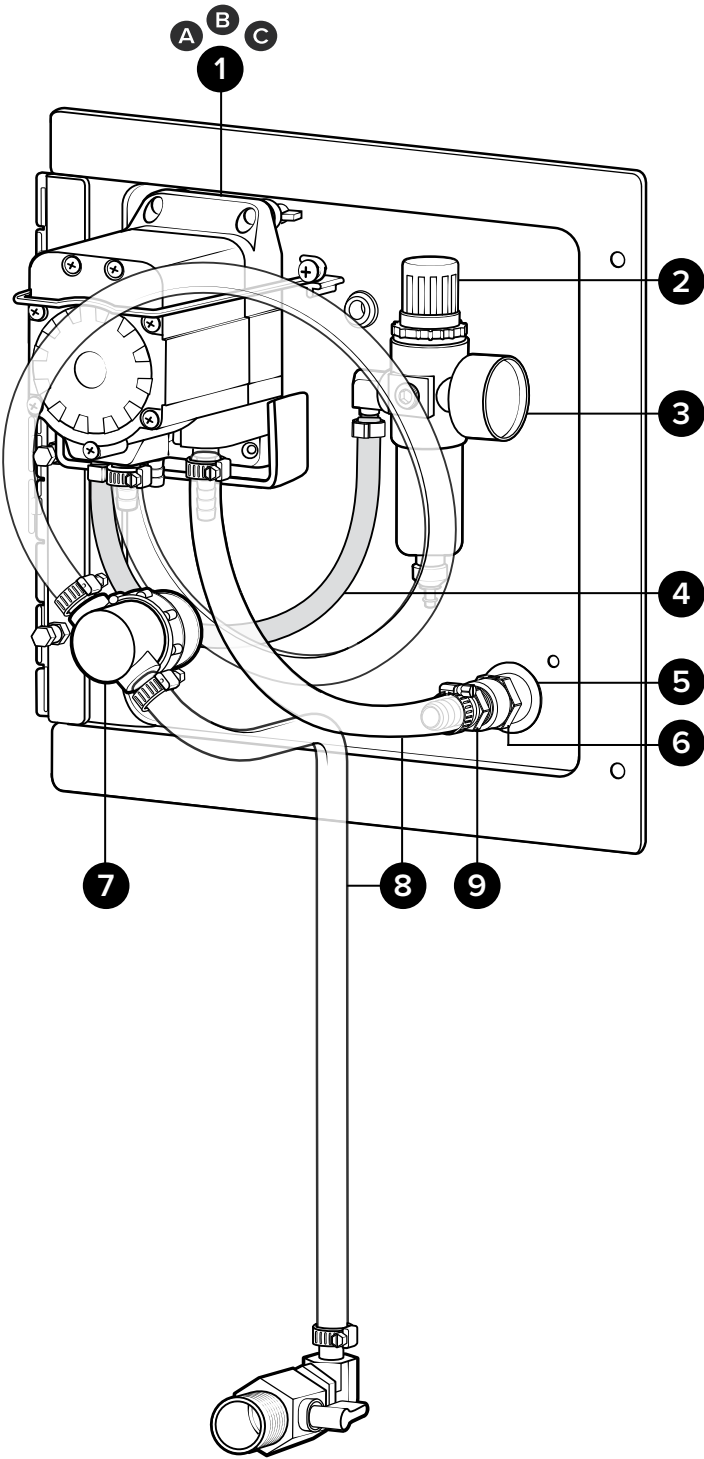
Plate assembly for transfer units with ½ in. hose - Santoprene pump

Additional plate assembly pump options:

PA-TU12K: Kalrez pump

PA-TU12V: Viton pump

| Item number | | Description |
|-------------|----------|--|
| 1 | 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 |
| 2 | R25 | Air regulator - two ¼ in. FPT ports - two ⅛ in. FPT ports - includes filter and bowl |
| 3 | AG100 | Air gauge - ⅜ in. NPT - 100 PSI dry model |
| 4 | H14BL-F | ¼ in. blue hose - hybrid TPE - available per ft. |
| 5 | FW12NPT | Flat washer for ½ in. NPT - stainless - .88 id x 1.5 od x 0.05 thk |
| 6 | SC1212 | SS coupler ½ in. x ½ in. |
| 7 | STR12-IL | In-line strainer - ½ barb - EPDM gasket - 20 mesh SS - black bowl |
| 8 | H12CL-CB | ½ in. id clear braid hose - PVC - available per ft. |
| 9 | HBSS1212 | Stainless hose barb ½ MPT x ½ barb |



Back Plate Assembly

Back view

PA-TU12:

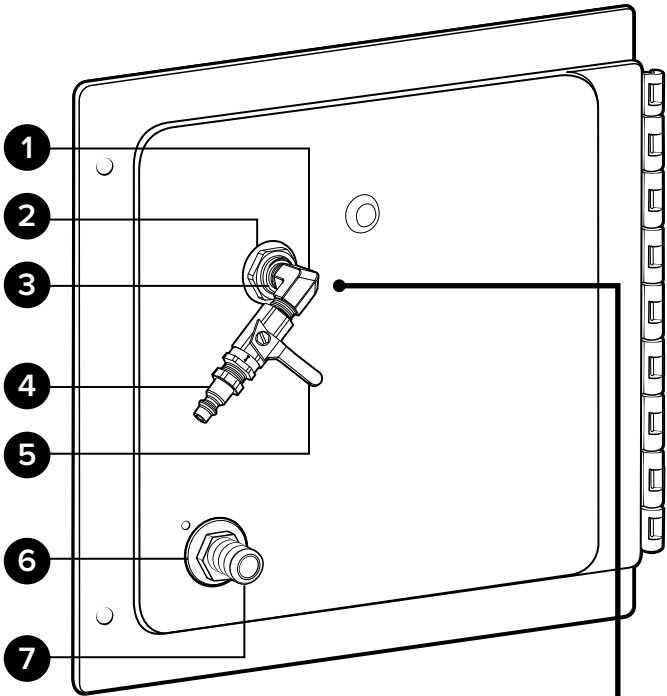
Plate assembly for transfer units with ½ in. hose - Santoprene pump

Additional plate assembly pump options:

PA-TU12K: Kalrez pump

PA-TU12V: Viton pump

| Item number | | Description |
|-------------|----------|--|
| 1 | SEL14M | Stainless elbow ¼ in. MPT x ¼ in. MPT |
| 2 | SSSFN12 | Serrated flange nut - stainless - ½ in. |
| 3 | SSA14BKH | Bulkhead adapter - stainless - ¼ NPT x ¼ NPSM |
| 4 | AP14 | Air fitting ¼ MPT x plug - nickel-plated brass |
| 5 | BVB14 | Air inlet valve - ¼ in. FPT x ¼ in. FPT |
| 6 | FW12NPT | Flat washer for ½ in. NPT - stainless - .88 id x 1.5 od x 0.05 thk |
| 7 | HBSS1212 | Stainless hose barb ½ MPT x ½ barb |

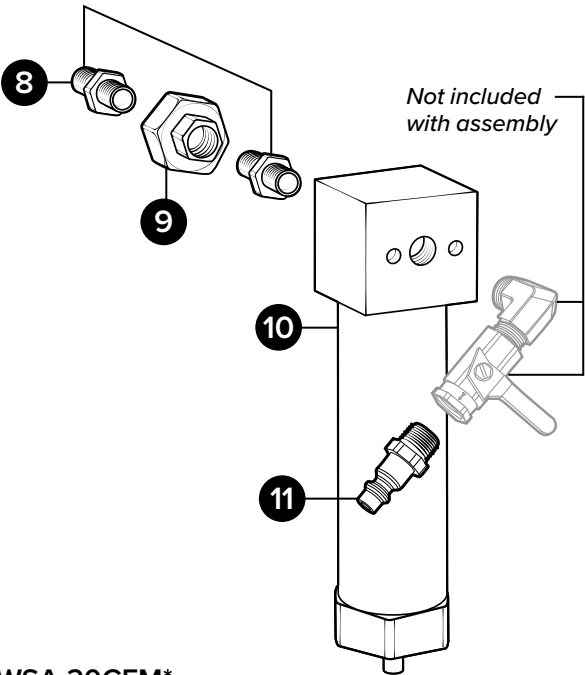


Optional Components

WSA-20CFM:

Water separator assembly - 20 CFM - ¼ in. FPT ports - includes air plug and union fittings

| Item number | | Description |
|-------------|----------|--|
| 8 | SN1414 | Stainless hex nipple ¼ MPT x ¼ MPT |
| 9 | SSU14 | Stainless steel union - ¼ in. FPT |
| 10 | WS-20CFM | Water separator - 20 CFM - ¼ in. FPT ports |
| 11 | AP14 | Air fitting ¼ MPT x plug - nickel-plated brass |



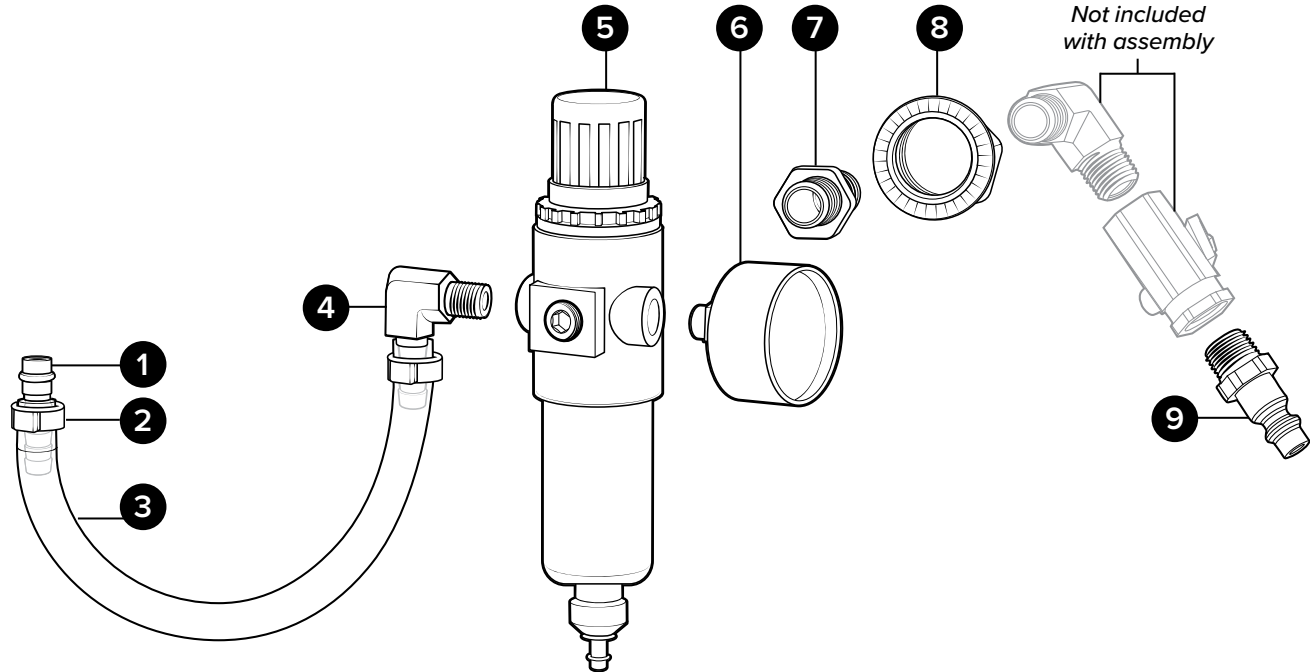
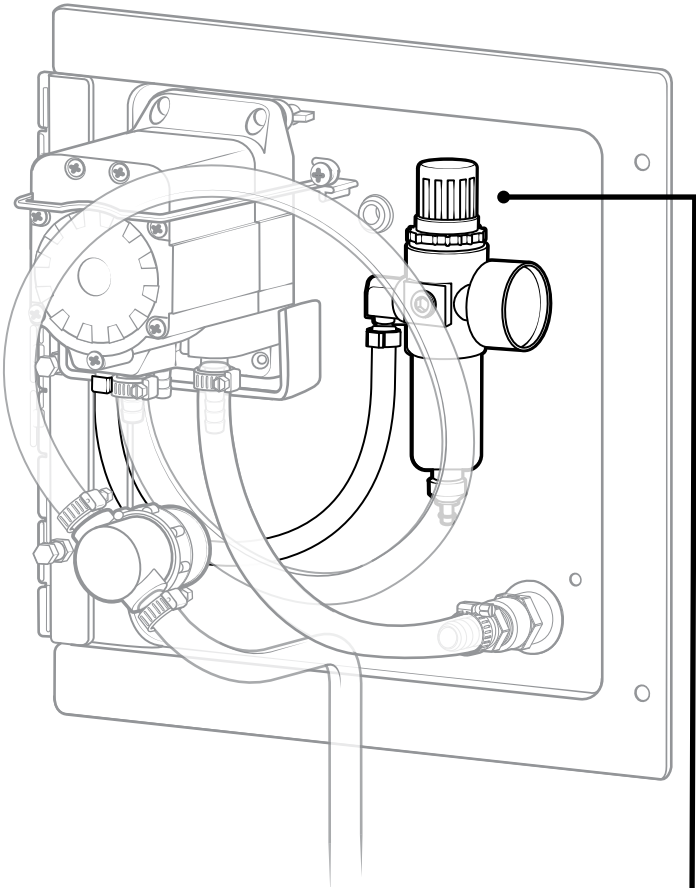
WSA-20CFM*

*Optional assembly sold separately

Back Plate Sub-assemblies

RGA-R25-SP:
 Air regulator assembly for spray and transfer units - includes air gauge, hose barb elbow, clamps, and bulkhead fittings

| Item number | | Description |
|-------------|-----------|--|
| 1 | HBB14P | ¼ in. hose barb - brass - for G57/P56 air fitting with o-ring |
| 2 | EC14 | Oetiker clamp for ¼ in. hose |
| 3 | H14BL-F | ¼ in. blue hose - hybrid TPE - available per ft. |
| 4 | HBSEL1814 | Stainless hose barb ⅜ MPT x ¼ barb elbow |
| 5 | R25 | Air regulator - two ¼ in. FPT ports - two ⅜ in. FPT ports - includes filter and bowl |
| 6 | AG100 | Air gauge - ⅜ in. NPT - 100 PSI dry model |
| 7 | SSA14BKH | Bulkhead adapter - stainless - ¼ NPT x ¼ NPSM |
| 8 | SSSFN12 | Serrated flange nut - stainless - ½ in. |
| 9 | AP14 | Air fitting ¼ MPT x plug - nickel-plated brass |



RGA-R25-SP

Suction Assembly

SCTNA-TU:

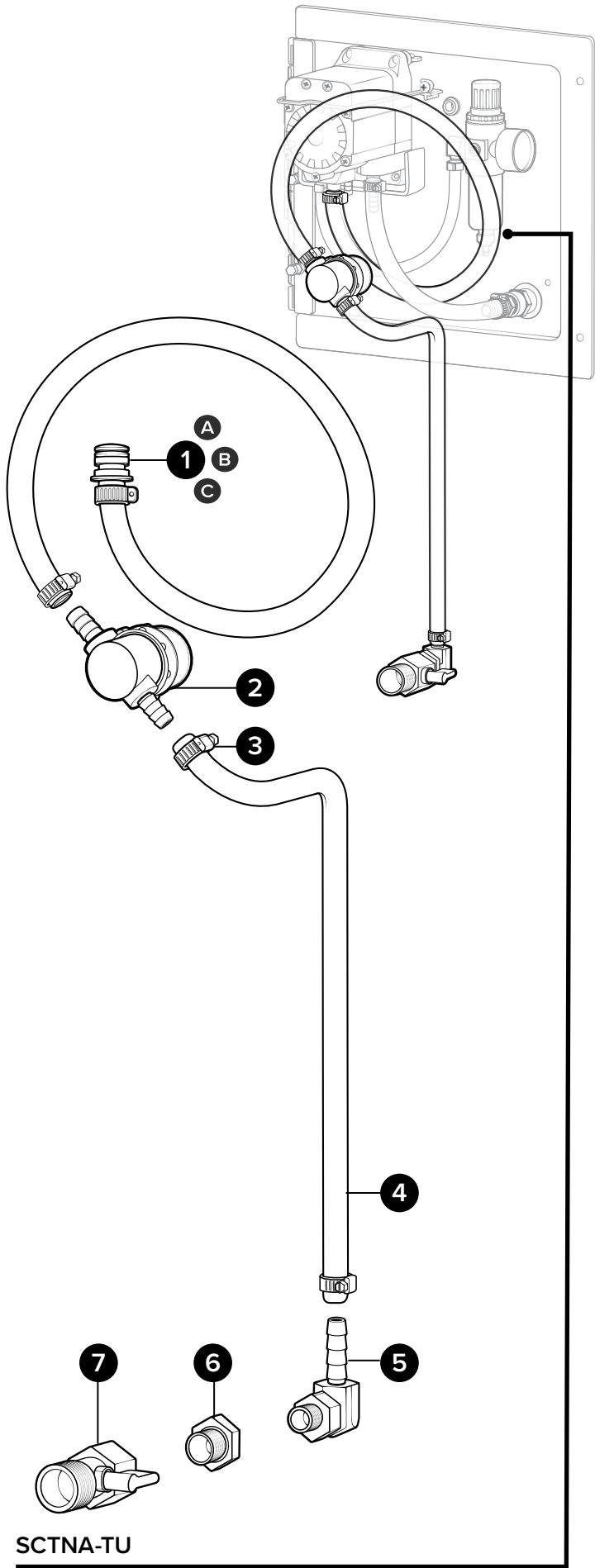
Suction assembly for transfer units - includes suction valve, hose, in-line strainer, and pump hose barb - for Santoprene pump

Additional suction assembly options:

SCTNA-TUK: Transfer units with Kalrez pump

SCTNA-TUV: Transfer units with Viton pump

| Item number | | Description |
|-------------|-----------|--|
| 1 | 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 |
| 2 | STR12-IL | In-line strainer - ½ barb - EPDM gasket - 20 mesh SS |
| 3 | SSC12 | Stainless screw band clamp for ½ in. hose |
| 4 | H12CL-CB | ½ in. id clear braid hose - PVC - available per ft. |
| 5 | HBSEL1212 | Stainless hose barb ½ MPT x ½ barb elbow |
| 6 | HHPB3412 | Hex head poly bushing ¾ MPT x ½ FPT |
| 7 | PVCV34FM | PVC valve ¾ in. FPT x ¾ in. MPT |



Hose Assembly

HA12CL-15-CB:

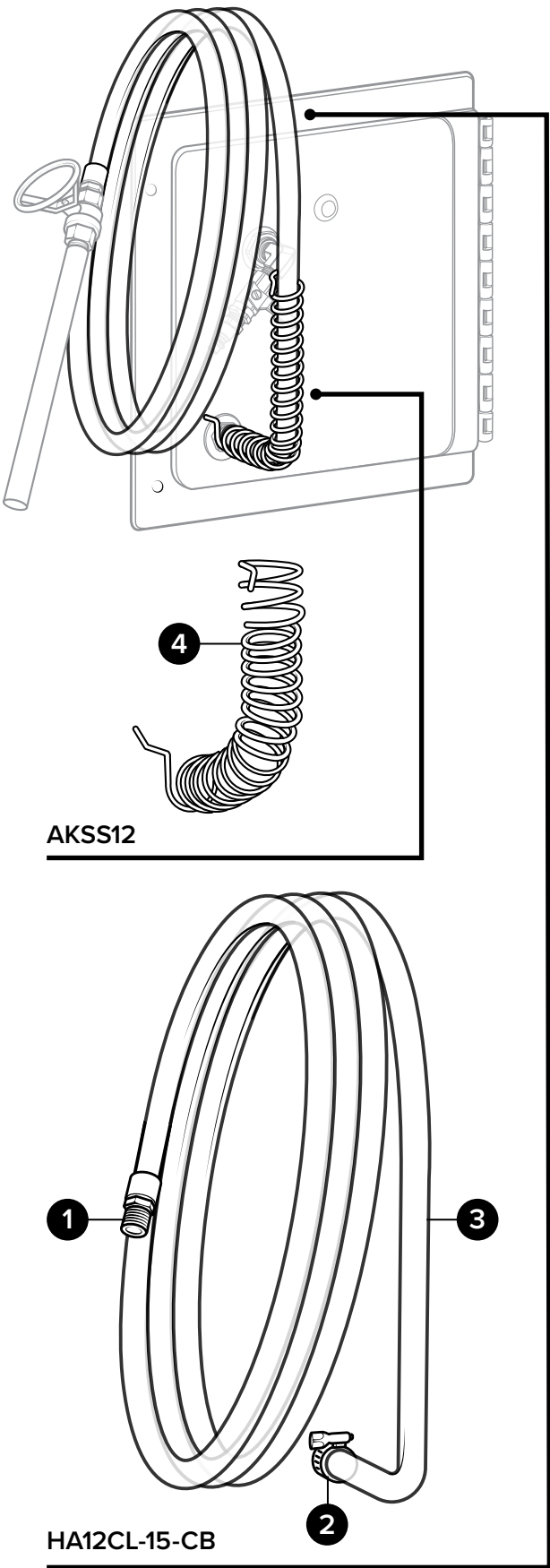
Hose assembly - 15 ft. of ½ in. clearbraided hose - includes ferruled hose barb

| Item number | | Description |
|-------------|----------|---|
| 1 | HBSS1212 | Stainless hose barb ½ MPT x ½ barb |
| 2 | SSC12 | Stainless screw band clamp for ½ in. hose |
| 3 | H12CL-CB | ½ in. id clear braided hose - PVC - available per ft. |

AKSS12:

Stainless anti-kink spring for ½ in. hose

| Item number | | Description |
|-------------|--------|---|
| 4 | AKSS12 | Stainless anti-kink spring for ½ in. hose |

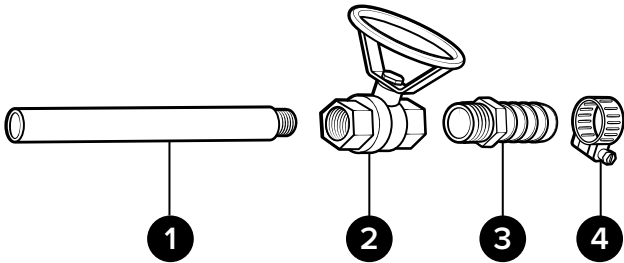


Wand Assembly Options

SSWA1210:

Stainless wand assembly for transfer units with ½ in. hose - 10 in. wand - includes ball valve, barb, and screw band clamp

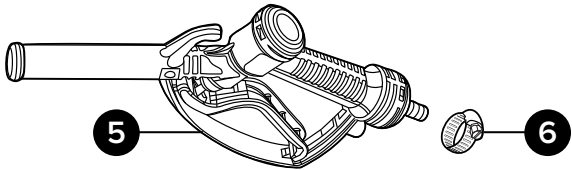
| Item number | | Description |
|-------------|----------|---|
| 1 | W1210 | ½ in. NPT wand - polished stainless - 10 in. long - threaded one end only |
| 2 | BVSS12 | ½ in. stainless ball valve - welded nut |
| 3 | HBSS1212 | Stainless hose barb ½ MPT x ½ barb |
| 4 | SSC12 | Stainless screw band clamp for ½ in. hose |



PFGA-WH:

White polypropylene fill gun assembly for ½ in. hose - includes fill gun, barb, and screw band clamp

| Item number | | Description |
|-------------|---------|---|
| 5 | PFG12HB | White fill gun - polypropylene - ½ in. hose barb - Hastelloy spring - Viton seals |
| 6 | SSC12 | Stainless screw band clamp for ½ in. hose |



CSSWA1227:

Curved stainless wand assembly for ½ in. hose - 27 in. wand - includes coupling, ball valve, barb, and screw band clamp

| Item number | | Description |
|-------------|----------|--|
| 7 | CSSW27 | ¾ in. od 180 degree curved wand - polished stainless - 27 in. long |
| 8 | CP1234CF | Coupling - ½ in. NPT x ¾ in. od compression fitting - stainless |
| 9 | BVSS12 | ½ in. stainless ball valve - welded nut |
| 10 | HBSS1212 | Stainless hose barb ½ MPT x ½ barb |
| 11 | SSC12 | Stainless screw band clamp for ½ in. hose |

