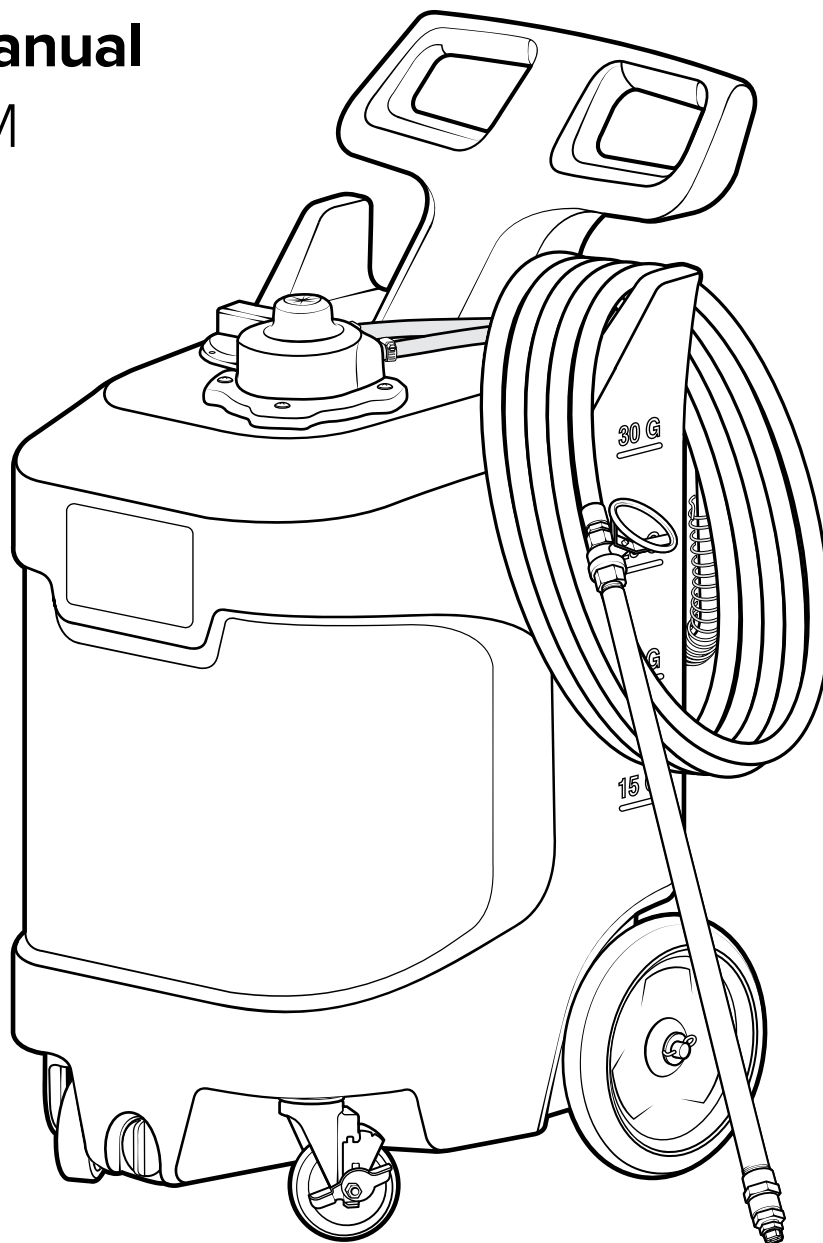


# 30 Gallon Gel Unit With Agitator

## Service Manual GI-30N-AM



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  
service 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 (37.8°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.

# 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:

**Note:** Disconnect couplers from the air fittings before opening the backplate and servicing the unit.

- 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 air regulator bowl from the air regulator.

- Check the suction line 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Agitator not mixing properly, or not at all.                                      | <ul style="list-style-type: none"> <li>• Check to ensure that the agitator is below the solution level. Agitator will not mix properly if solution level is too low.</li> <li>• If solution level is correct, the air motor assembly may need to be replaced.</li> </ul>                                                                                                                                                                                                                                                                          |
| 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 slower than normal                                                | <ul style="list-style-type: none"> <li>• Verify air supply meets the minimum air requirements for the unit.</li> <li>• Inspect outlet side of system for build up. Clean as needed.</li> </ul>                                                                                                                                                                                                                                                                                                                                                    |
| Pump is cycling faster than normal                                                | <ul style="list-style-type: none"> <li>• Inspect suction line for debris build up. Clean as needed.</li> <li>• Verify suction line ball valve is open.</li> <li>• Inspect suction line for holes or kinks.</li> <li>• Remove and inspect the inlet barb fitting. Verify the o-ring is in place and in good condition.</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 for debris or damage. Clean or replace as needed.</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> |

# Tank Assembly

Front view

## TNKA-30N-BK-AM:

30 gallon natural tank assembly for portable gel units - includes black lid, drain plug, wheels, suction valve, and backplate thumb nuts

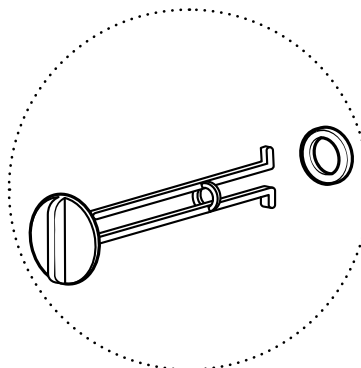
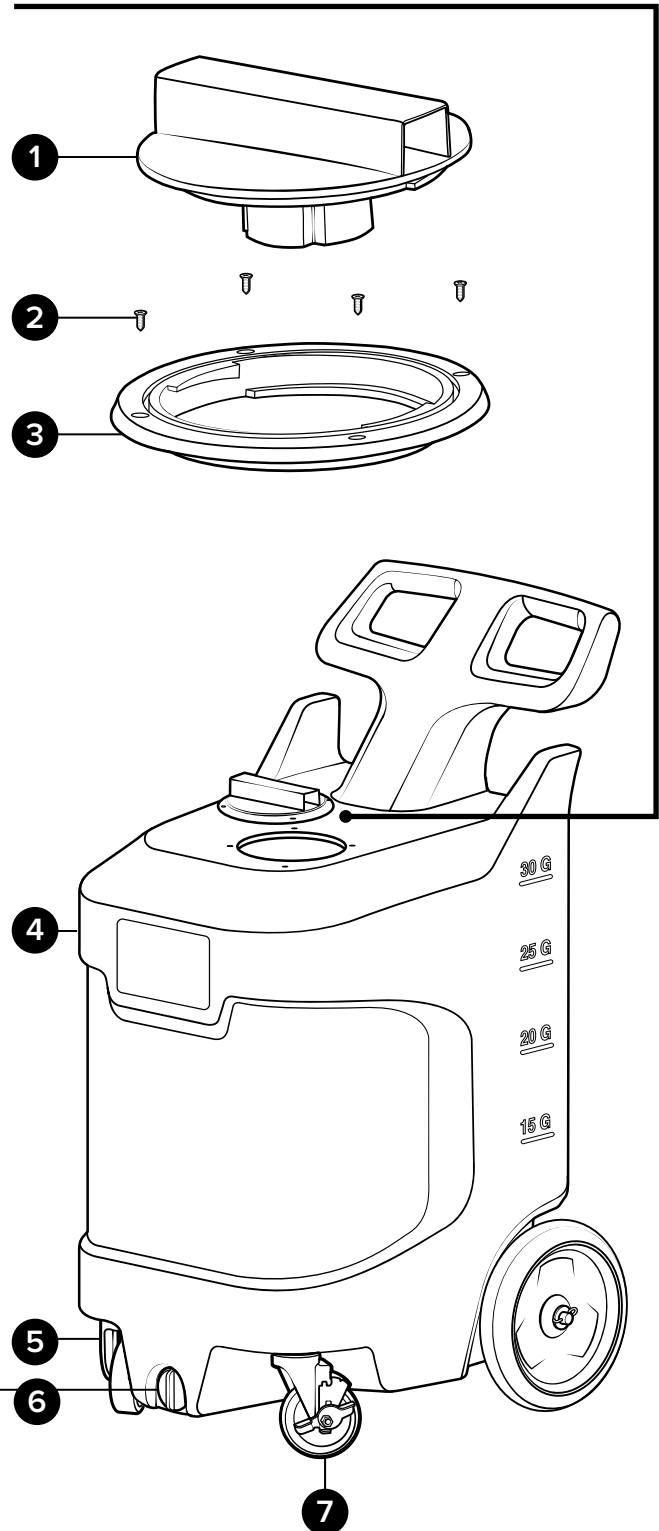
## LDA-5BK:

Lid assembly - includes 5 in. black lid, lid flange, and mounting screws

| Item number   | Description                                         |
|---------------|-----------------------------------------------------|
| 1 LD-5BK-LID  | 5 in. lid - polypropylene - black                   |
| 2 S812-FH     | #8 x 1/2 in. screw - stainless - flat head Phillips |
| 3 LD-5BK-FLNG | 5 in. lid flange - polyethylene - black             |

| Item number  | Description                                                           |
|--------------|-----------------------------------------------------------------------|
| 4 TNK-30N-AM | 30 gallon natural tank for portable air powered gel unit              |
| 5 CST5SS     | Swivel caster - stainless - 5 in. clearance - 4 in. wheel             |
| 6 DPA        | Drain plug assembly for portable units - includes gasket              |
| 7 CST5SS-L   | Swivel caster - stainless - 5 in. clearance - 4 in. wheel - with lock |

## LDA-5BK



**TNKA-30N-BK-AM:**

30 gallon natural tank assembly for portable gel units - black lid - includes drain plug, wheels, suction valve, and backplate thumb nuts

**Back view**

**BPTNA:**

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

| Item number | Description                                                    |
|-------------|----------------------------------------------------------------|
| 1           | BST1420118-VS ¼-20 x 1 ⅛ in. set bolt - stainless - Vibra-Seal |
| 2           | TN1420 ¼-20 thumb nut - brass insert - assembled with tether   |

**VLVA-BVPVC34:**

Suction valve assembly - includes ¾ in. PVC valve, bushing, ¾ in. hose barb elbow, and screw band clamp

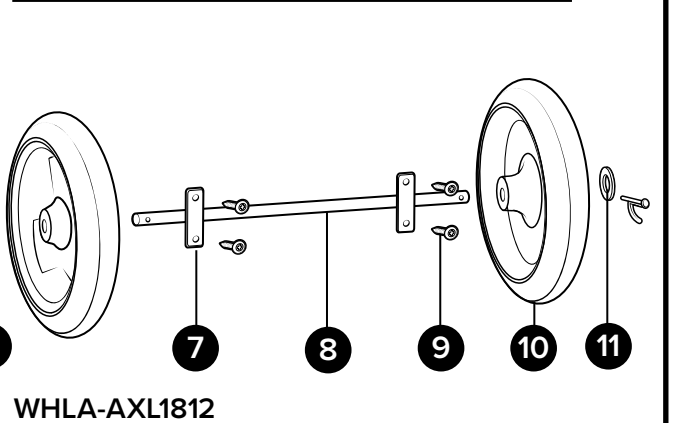
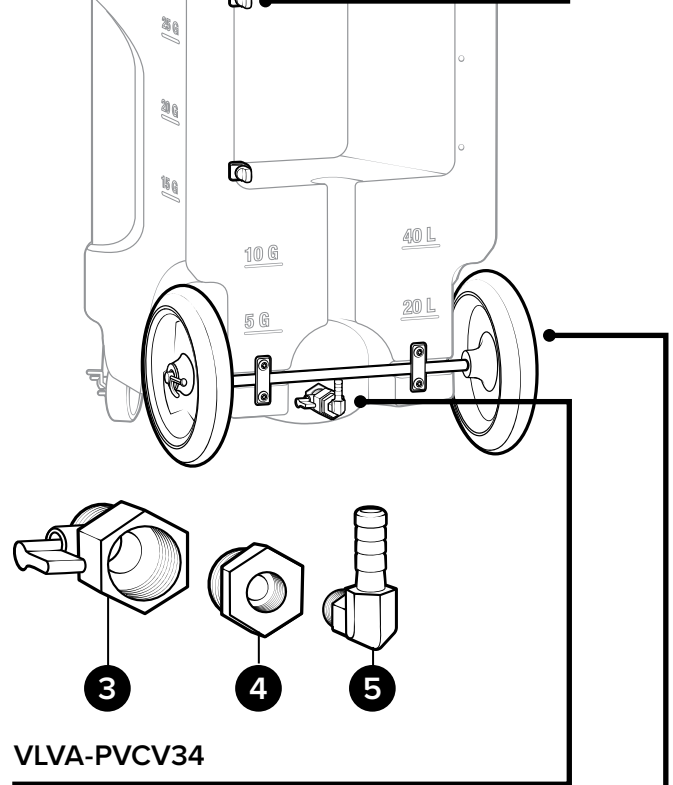
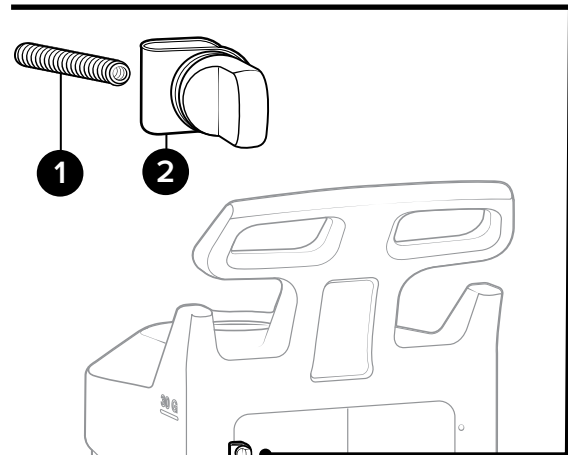
| Item number | Description                                              |
|-------------|----------------------------------------------------------|
| 3           | BVPVC34MF Ball valve - PVC - ¾ NPT to ¾ FNPT - EPDM seal |
| 4           | HHPB3414 Hex head poly bushing ¾ MPT x ¼ FPT             |
| 5           | HBSSEL1438 Stainless hose barb ¼ MPT x ⅜ barb elbow      |

**WHLA-AXL1812:**

10 in. wheel assembly - includes 18.5 in. axle, axle plate, bolts, washers, and cotter pins

| Item number | Description                                                                                      |
|-------------|--------------------------------------------------------------------------------------------------|
| 6           | COT Cotter pin - stainless - ⅛ in. dia. x 1 in. long                                             |
| 7           | PLSS-AXL Axle plate - stainless - 2.5 in. x 1 in. - 2 holes                                      |
| 8           | AXL1812 Axle - stainless - 0.625 dia. x 18.5 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. od pipe or axle - stainless - 0.64 in. id x 1.2 in. od x 0.05 in. thk |

**BPTNA**



# Back Plate Assembly

Inside view

## PA-GI12-AM:

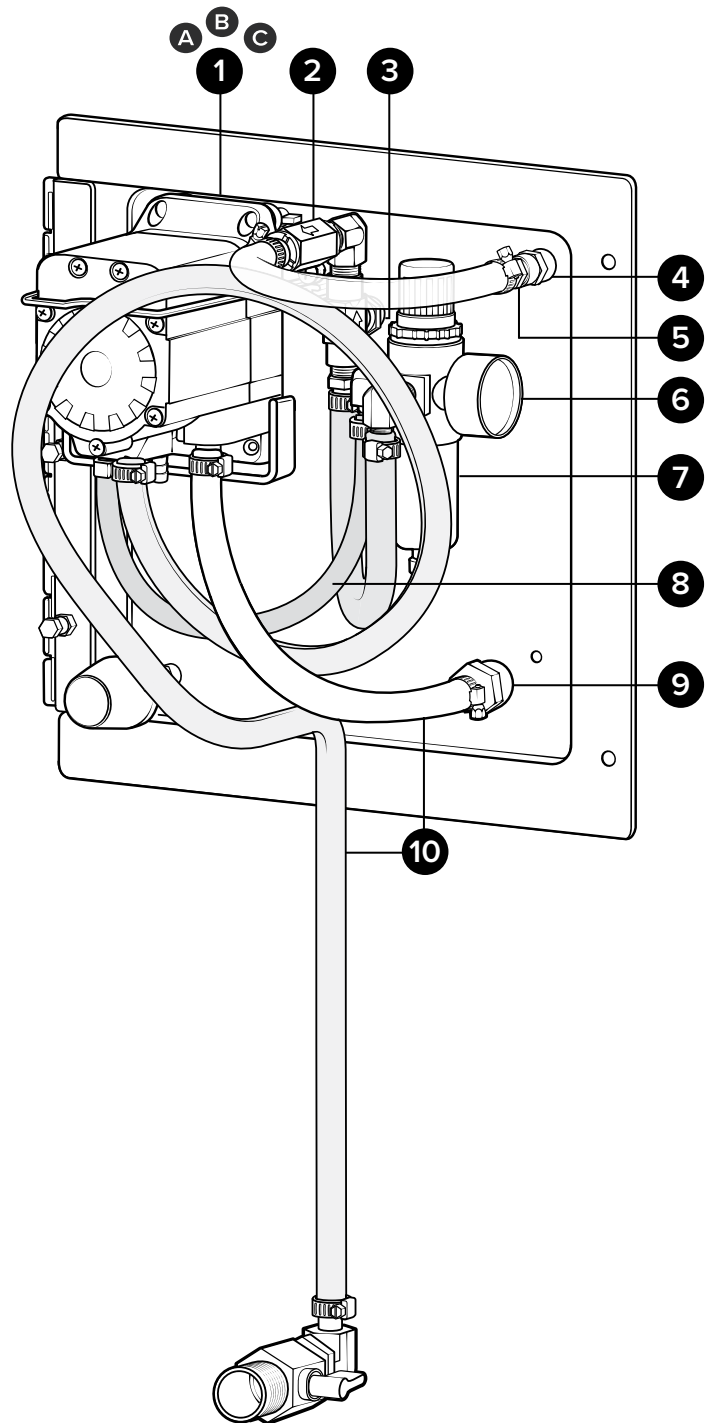
Plate assembly for portable gel air motor units with 1/2 in. hose - Santoprene pump

## Additional plate assembly pump options:

PA-GI12K-AM: Kalrez pump

PA-GI12V-AM: 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 CV1438    | 1/4 MPT x 3/8 barb - PVC check valve - SS spring                                         |
| 3 NV14      | Needle valve - 1/4 in. NPT - includes black knob                                         |
| 4 SC1414    | Stainless pipe coupler - 1/4 in. x 1/4 in.                                               |
| 5 HBSS1438  | Stainless hose barb 1/4 MPT x 3/8 barb                                                   |
| 6 AG100     | Air gauge - 1/8 in. NPT - 100 psi dry model                                              |
| 7 R25       | Air regulator - two 1/4 in. FPT ports - two 1/8 in. FPT ports - includes filter and bowl |
| 8 H14BL-F   | 1/4 in. blue hose - hybrid TPE - available per ft.                                       |
| 9 HBFSS1238 | Stainless steel hose barb 1/2 FPT x 3/8 barb                                             |
| 10 H38BL-F  | 3/8 in. blue hose - hybrid TPE - available per ft.                                       |



**PA-GI12-AM:**

Plate assembly for portable gel air motor units with ½ in. hose - Santoprene pump

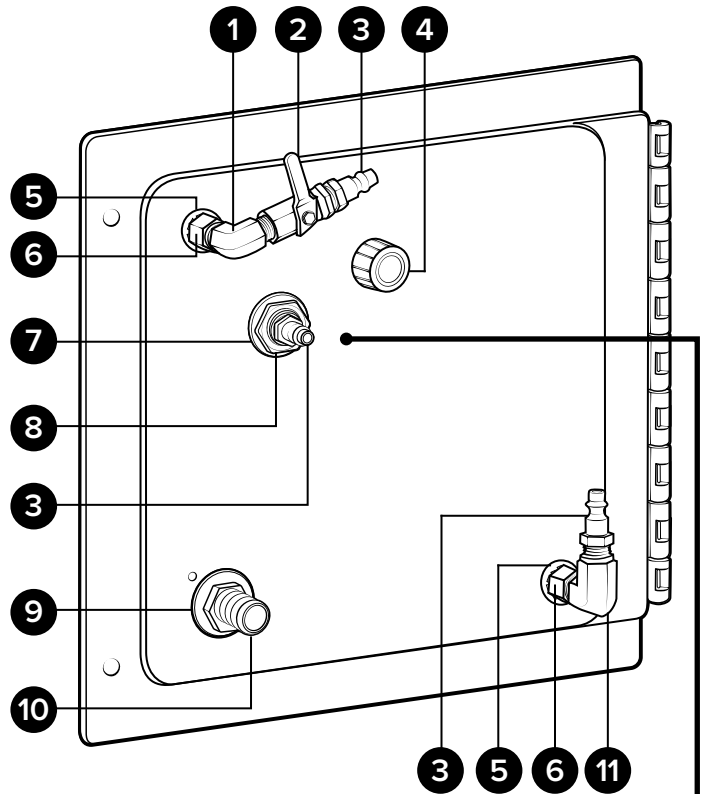
**Additional plate assembly pump options:**

PA-GI12K-AM: Kalrez pump

PA-GI12V-AM: Viton pump

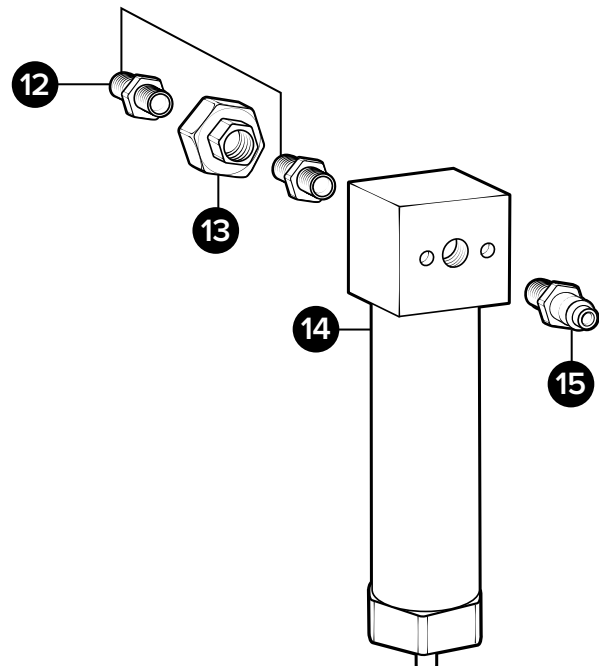
**Back view**

| Item number | Description                                                                                    |
|-------------|------------------------------------------------------------------------------------------------|
| 1           | SEL14M Stainless elbow ¼ in. MPT x ¼ in. MPT                                                   |
| 2           | BVB14 Air inlet valve - ¼ in. FPT x ¼ in. FPT                                                  |
| 3           | AP14 Air fitting ¼ MPT x plug - nickel-plated brass                                            |
| 4           | NV14-HNDL Black knob for needle valve                                                          |
| 5           | TW14NPT Tooth lock washer for ¼ in. NPT - stainless - 0.56 in. id x 0.96 in. od x 0.06 in. thk |
| 6           | SSA14 Stainless adaptor ¼ MPT x ¼ FPT                                                          |
| 7           | SSSFN12 Serrated flange nut - stainless - ½ in.                                                |
| 8           | SSA14BKH Bulkhead adapter - stainless - ¼ NPT x ¼ NPSM                                         |
| 9           | FW12NPT Flat washer for ½ in. NPT - stainless - 0.88 in. id x 1.5 in. od x 0.05 in. thk        |
| 10          | HBSS1212 Stainless hose barb ½ MPT x ½ barb                                                    |
| 11          | SSE14 Stainless street elbow ¼ in.                                                             |

**Optional Components****WSA-20CFM:**

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

| Item number | Description                                         |
|-------------|-----------------------------------------------------|
| 12          | SN1414 Stainless hex nipple ¼ MPT x ¼ MPT           |
| 13          | SSU14 Stainless steel union - ¼ in. FPT             |
| 14          | WS-20CFM Water separator - 20 CFM - ¼ in. FPT ports |
| 15          | AP14 Air fitting ¼ MPT x plug - nickel-plated brass |

**WSA-20CFM\***

\*Optional assembly sold separately

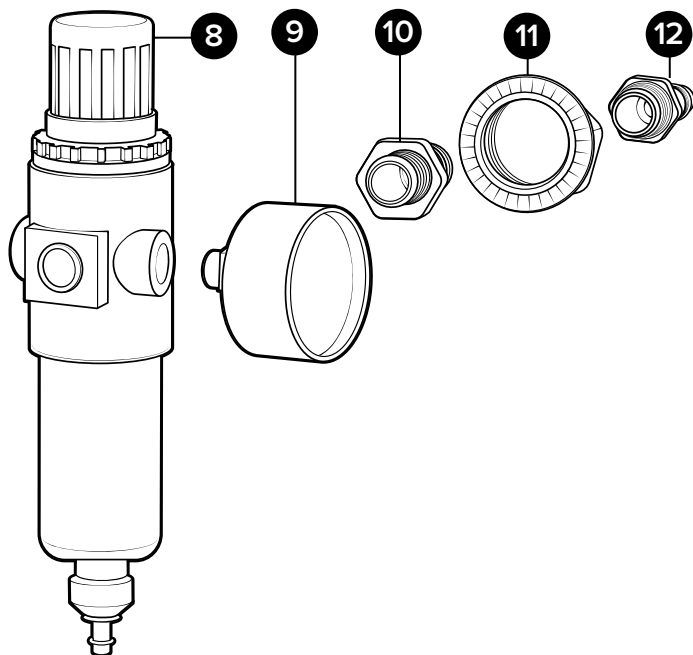
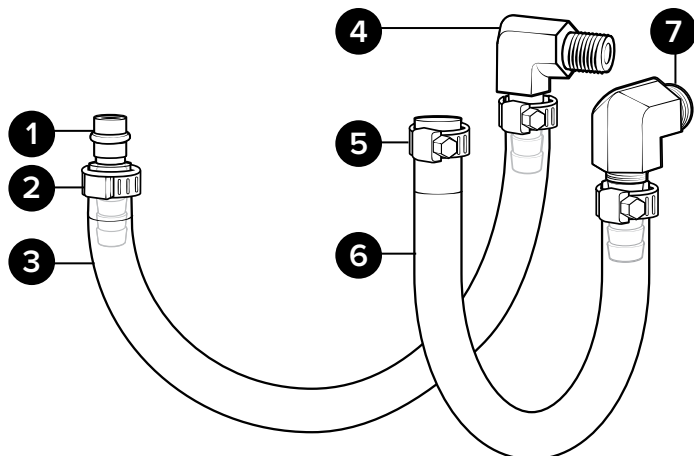
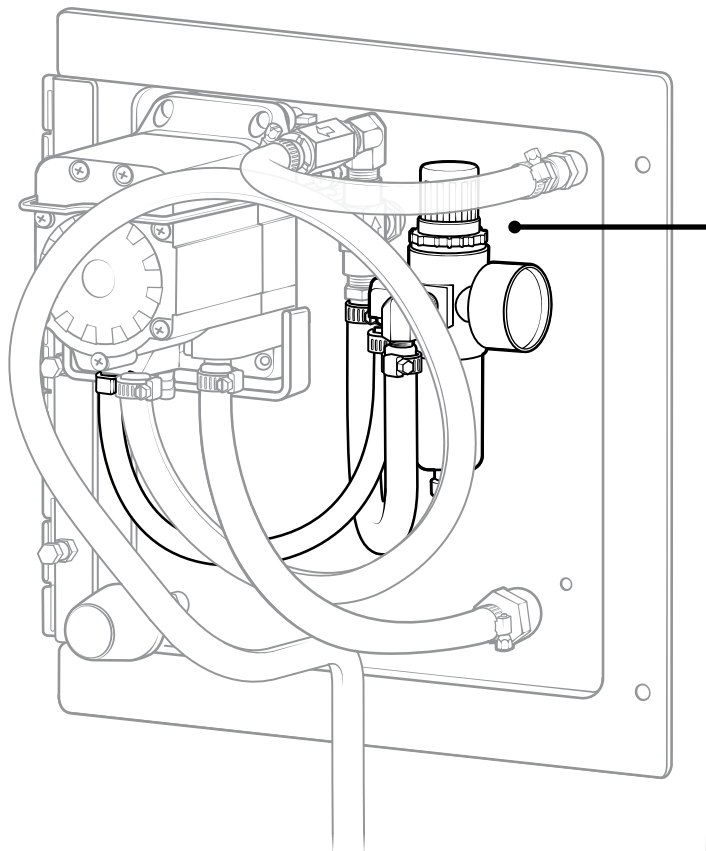


# Back Plate Sub-assemblies

## RGA-R25-PF:

Air regulator assembly for portable gel units - includes air gauge, pump barb, hose, bulkhead fittings, and air plug

| 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           | SSC38 Stainless screw band clamp for ⅜ in. hose                                          |
| 6           | H38BL-F ⅜ in. blue hose - hybrid TPE - available per ft.                                 |
| 7           | HBSEL1438 Stainless hose barb ¼ MPT x ⅜ barb elbow                                       |
| 8           | R25 Air regulator - two ¼ in. FPT ports - two ⅜ in. FPT ports - includes filter and bowl |
| 9           | AG100 Air gauge - ⅜ in. NPT - 100 PSI dry model                                          |
| 10          | SSA14BKH Bulkhead adapter - stainless - ¼ NPT x ¼ NPSM                                   |
| 11          | SSSFN12 Serrated flange nut - stainless - ½ in.                                          |
| 12          | AP14 Air fitting ¼ MPT x plug - nickel-plated brass                                      |



RGA-R25-PF

# Air Motor Assembly

## AIRMTRA-GEL-PRP:

Air motor assembly for portable gel air motor units - includes air motor, coupling, and prop and shaft

## AIRMTRA-GEL:

Air motor assembly - includes motor, quick connects, hose, hose barb, screw band clamps, bolts and locknuts

| Item number   | Description                                                      |
|---------------|------------------------------------------------------------------|
| 1 GEL-MTR     | Gel motor - air operated - lube free - includes 2x SS hose barbs |
| 2 B1420114-PH | ¼-20 x 1 ¼ in. bolt - stainless - pan head Phillips              |
| 3 PL-GEL-MTR  | Plate for tank-30n (gel motor mount) - PL-4X8-¾-WHITE            |
| 4 LN1420      | ¼-20 locknut - stainless - nylon insert                          |
| 5 SSC38       | Stainless screw band clamp for ¾ in. hose                        |
| 6 H38BL-F     | ¾ in. blue hose - hybrid TPE - available per ft.                 |
| 7 HBSS1438    | Stainless hose barb ¼ MPT x ¾ barb                               |
| 8 QCB14F      | Brass non check ¼ in. quick connect air plug - FPT               |

## CP1212:

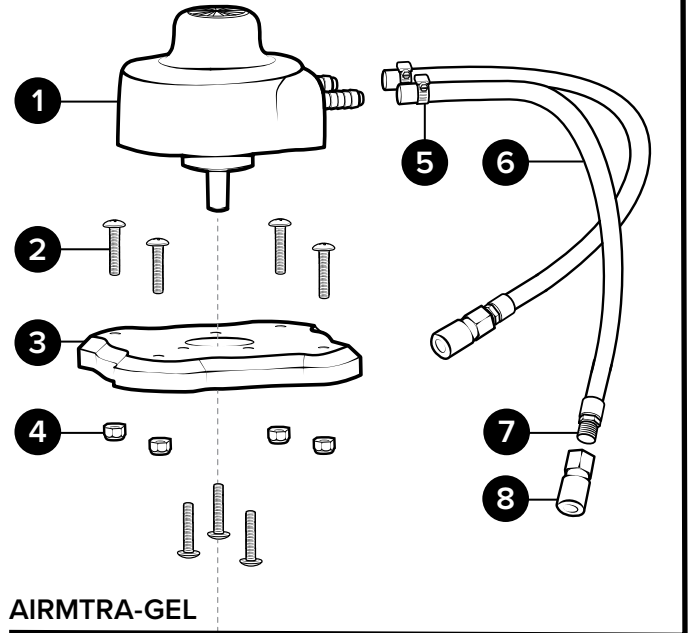
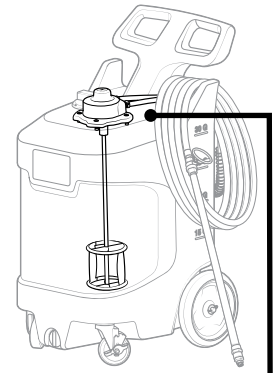
Stainless coupling

| Item number | Description                                 |
|-------------|---------------------------------------------|
| 9 CP1212    | Coupling - ½ in. x ½ in. shafts - stainless |

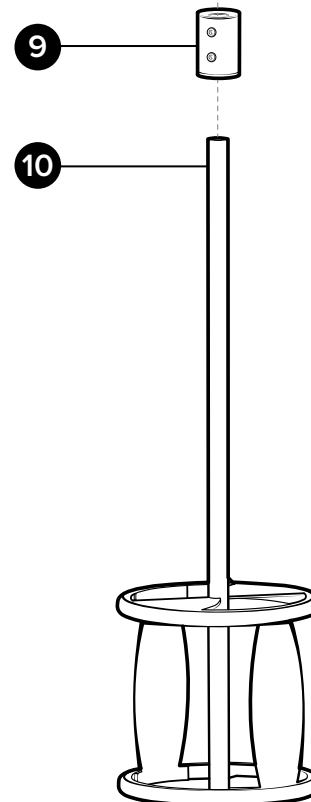
## GEL-PRP:

Prop and shaft for gel air motor units - stainless

| Item number | Description                                        |
|-------------|----------------------------------------------------|
| 10 GEL-PRP  | Prop and shaft for gel air motor units - stainless |



AIRMTRA-GEL



# Hose Assembly

## HA12BL-30:

Hose assembly - 30 ft. of ½ in. blue\* hose - includes ferruled hose barb, and screw band clamp

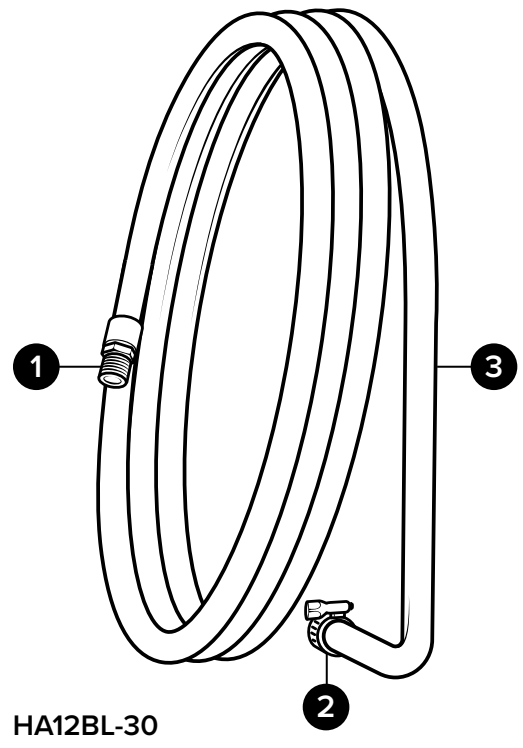
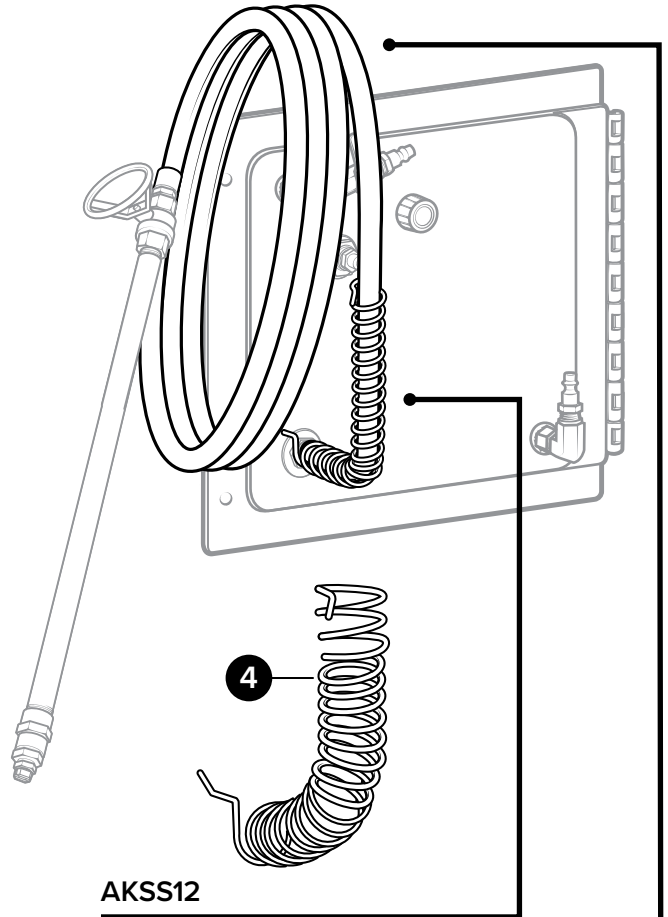
| Item number | Description |                                                   |
|-------------|-------------|---------------------------------------------------|
| 1           | HBSS1212    | Stainless hose barb ½ MPT x ½ barb                |
| 2           | SSC12       | Stainless screw band clamp for ½ in. hose         |
| 3           | H12BL-F     | ½ in. blue* hose - hybrid TPE - available per ft. |

\* Additional colors available, see datasheet for options.

## AKSS12:

Stainless anti-kink spring for ½ in. hose

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



# Wand Assembly

## SSWA1224-ST-GEL:

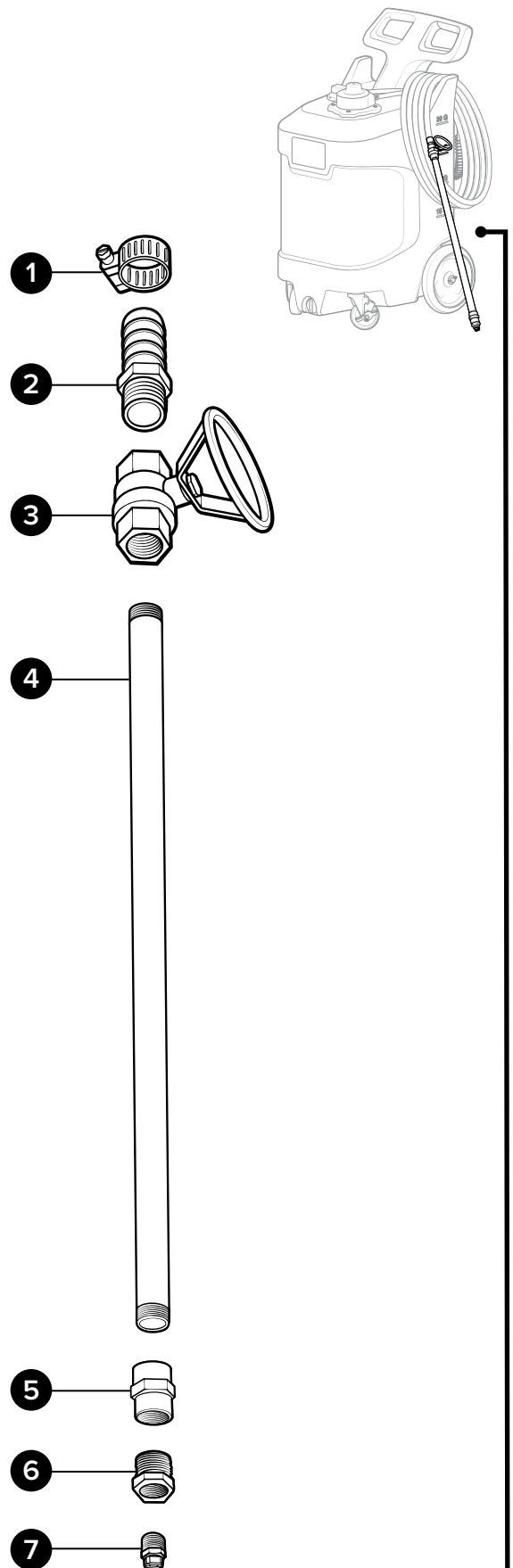
Stainless wand assembly for portable gel units with 1/2 in. hose - includes 24 in. stainless wand, ST2520SS spray tip, stainless ball valve, coupler, and bushing

| Item number | Description                                               |
|-------------|-----------------------------------------------------------|
| 1 SSC12     | Stainless screw band clamp for 1/2 in. hose               |
| 2 HBSS1212  | Stainless hose barb 1/2 MPT x 1/2 barb                    |
| 3 BVSS12    | STAINLESS BALL VALVE-1/2IN NPT                            |
| 4 SSN1224   | 1/2 in. NPT SCH40S pipe nipple - stainless 24 in. long    |
| 5 SC1212    | SS coupler 1/2 in. x 1/2 in.                              |
| 6 HHSB1214  | Hex head stainless bushing 1/2 MPT x 1/4 FPT              |
| 7 ST4008SS  | Spray tip - 40 degree fan - 0.8 GPM - stainless - 1/4 MPT |

## Additional Spray Tips

Additional spray tips can be found in parts package

| Item number | Description                                               |
|-------------|-----------------------------------------------------------|
| 8 ST1510SS  | Spray tip - 15 degree fan - 1.0 GPM - stainless - 1/4 MPT |
| 9 ST2520SS  | Spray tip - 25 degree fan - 2.0 GPM - stainless - 1/4 MPT |



SSWA1224-ST-GEL