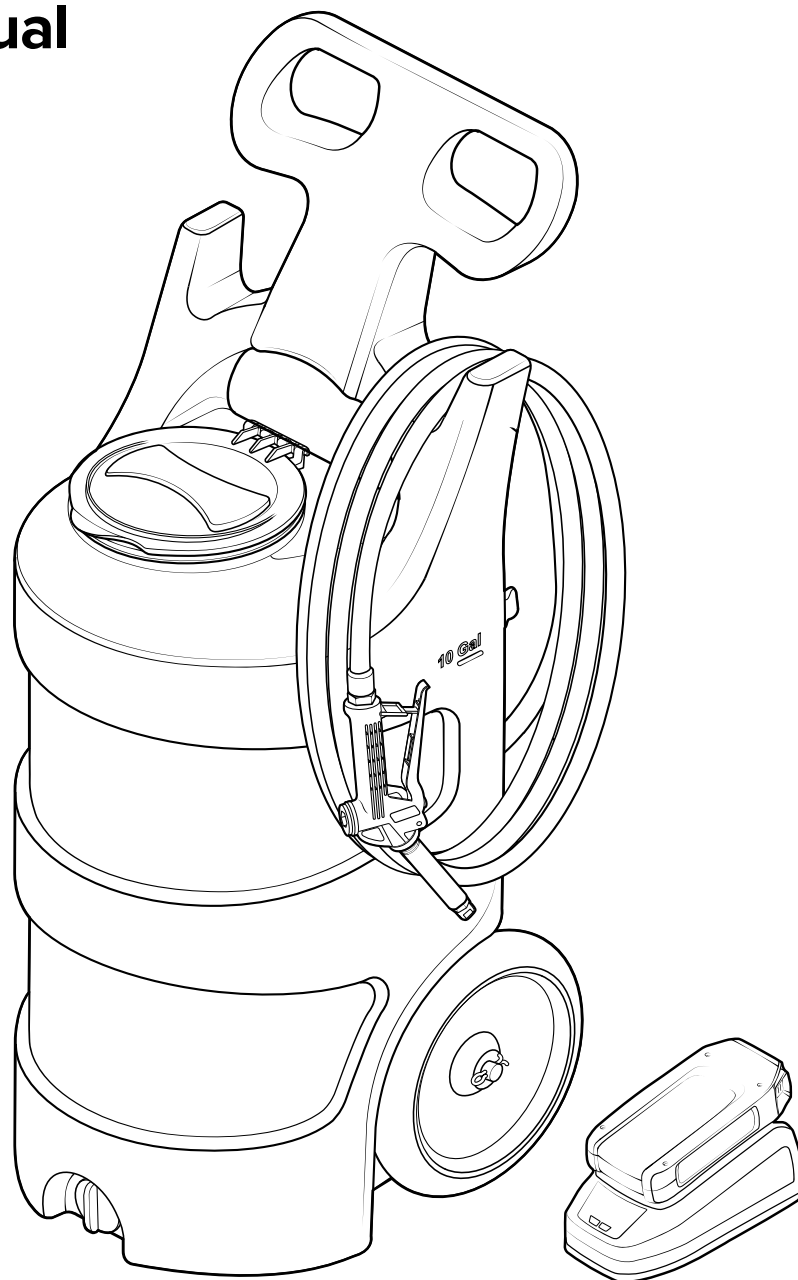


10 Gallon Battery Powered Foam Unit

Service Manual

FI-BP-10N



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. 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).

Some components may be hot during and after use. Use caution when servicing or handling the equipment.



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.

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.

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



Keep battery box lid closed and latched at all times unless accessing battery. Do not use with lid open or damaged. Do not expose unit to liquids, cleaning solutions, foam, or rain. The battery pack is not waterproof. Do not submerge in liquid. If battery pack gets wet, allow to dry before further use.

Using the unit with unapproved devices may result in a risk of fire, shock or personal injury. Only use with 24V Equip Series compatible equipment.

When not in use, store unit indoors in a cool, dry location. Keep unit away from unauthorized users. To prevent premature battery failure, do not store battery in a depleted state for long periods of time.

Safety

WARNING

First Aid Instructions

- Failure to follow first aid instructions may result in death or serious personal injury.
- If battery liquid comes in contact with skin, wash immediately with soap and water, then neutralize with lemon juice or vinegar.
- If battery liquid gets in your eyes, flush with clean water for a minimum of 10 minutes, then seek immediate medical attention.
- If battery liquid is swallowed, seek immediate medical attention.

State of California Proposition 65 Warning

- The battery can expose you to chemicals, including cobalt, lithium, manganese, nickel, oxide, and carbon black, which are known to the State of California to cause cancer and reproductive harm. For additional information, go to www.P65Warnings.ca.gov.

NOTICE

Refer to the separate manuals supplied with the battery and charger for additional safety precautions and instructions.

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.

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 may result in serious injury or death. Always ensure the unit has been depressurized 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. Verify all hose clamps are in good condition and properly secured.
- Check the suction line and strainer for debris. Clean as needed.
- If foam quality begins to decrease, inspect the wadding. Replace as needed.
- Store battery in a half-charged state and maintain battery every 3-6 months.

Servicing Your Unit

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

- Crescent wrench (2x)
- ¼ in. (7 mm) hex bit
- 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
Pump is cycling improperly	<ul style="list-style-type: none"> • Verify pump did not fail from chemical attack, or electrical malfunction. • Ensure proper chemical and concentration are being used. • Inspect suction line and strainer for debris or damage. • Needle valve may be open too far. Close and readjust the needle valve.
Foam comes out wet, no matter where the needle valve is positioned	<ul style="list-style-type: none"> • The check valve may need to be replaced. • Verify correct chemical concentration is being used. • If only the fluid pump is running, the electric air compressor may need to be replaced. • Check if the wadding is plugged. Remove and inspect it by following the instructions below: <ol style="list-style-type: none"> 1. Verify the unit does not have the battery installed or the power on. 2. Relieve all stored pressure in the unit by opening the ball valve, or squeezing the trigger handle. 3. Unthread the discharge wand from the ball valve or spray gun. 4. Remove and inspect the wadding from inside the wand. <p data-bbox="623 989 1446 1020">Note: Ensure tubing stays inside of wand when removing wadding.</p> 5. Replace wadding if necessary. Attach wand back onto the ball valve or spray gun.
Sporadic wet foam	<ul style="list-style-type: none"> • Verify correct chemical concentration is being used. • Ensure discharge hose is not kinked or damaged. • Inspect wadding. Replace wadding if it is clogged. • If wadding is next to spray tip, replace tubing inside the discharge wand.
Sporadic dry foam	<ul style="list-style-type: none"> • Inspect suction line and strainer for debris or damage. • If pump is cycling improperly or has failed, replace the pump.
The unit operates at a reduced pressure	<ul style="list-style-type: none"> • Inspect 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. • Inspect wadding. Replace wadding if necessary.
Battery will not completely charge	<ul style="list-style-type: none"> • Place a secondary battery on the charger. If the secondary battery charges as expected, it indicates that the initial battery is faulty and should be replaced. • If the problem continues to occur, the charger is bad. Replace battery charger.
Battery discharges too quickly	<ul style="list-style-type: none"> • Battery has reached life expectancy. Replace battery.
Power button LED slow flashing	<ul style="list-style-type: none"> • Dead battery, charge battery.
Power button LED fast flashing	<ul style="list-style-type: none"> • Compressor startup failure. Reset with a power cycle. • A faulty pump or compressor may need to be replaced.
Battery/charger fault light is flashing	<ul style="list-style-type: none"> • Refer to the separate manuals supplied with the battery and charger for more information regarding indicator and fault lights.

Tank Assembly

Front view

TNKA-10N-BK:

10 gallon natural tank assembly - black* lid - includes drain plug, wheels, suction valve, and backplate thumb nuts

LDA-7BK:

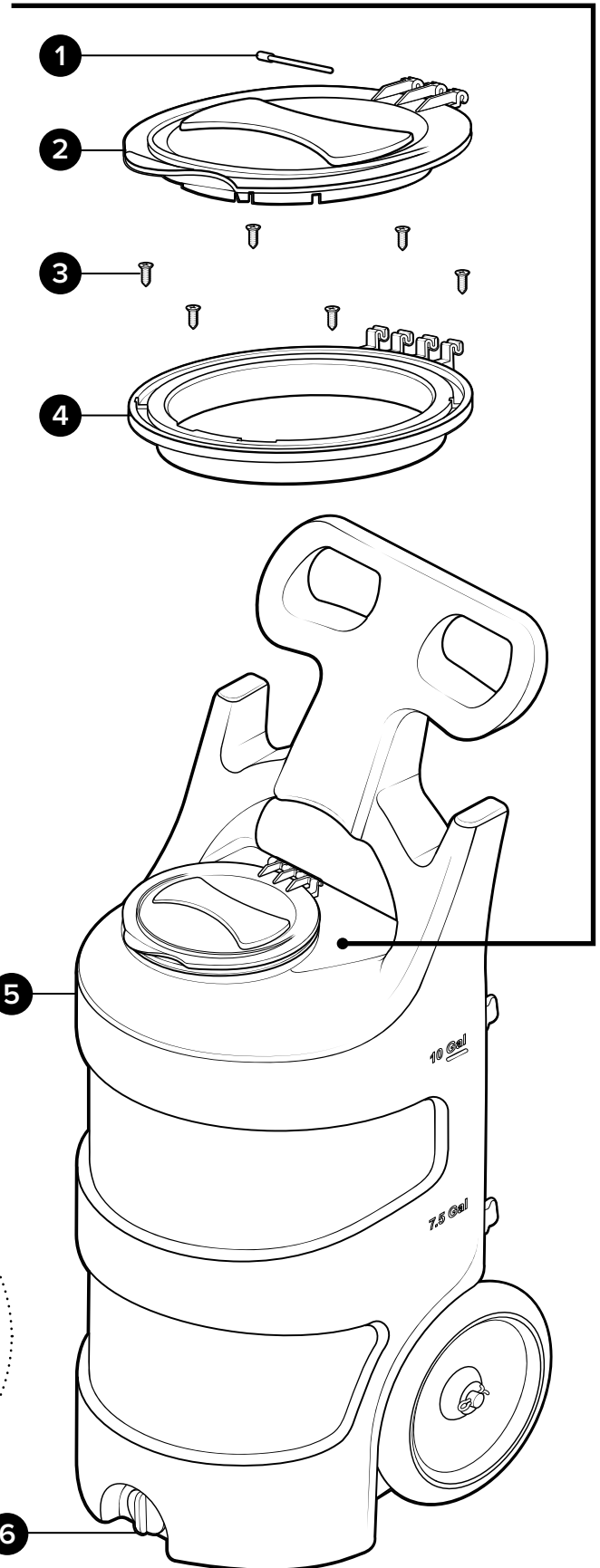
Lid assembly - includes 7 in. black* lid, lid flange, hinge pin, and mounting screws

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

* Additional colors available, see datasheet for options.

Item number	Description
5	TNK-10N 10 gallon natural tank
6	DPA Drain plug assembly for portable units - includes gasket

LDA-7BK



Tank Assembly

Back view

TNKA-10N-BK:

10 gallon natural tank assembly - 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-BVPVC34:

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

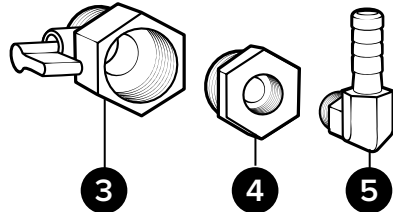
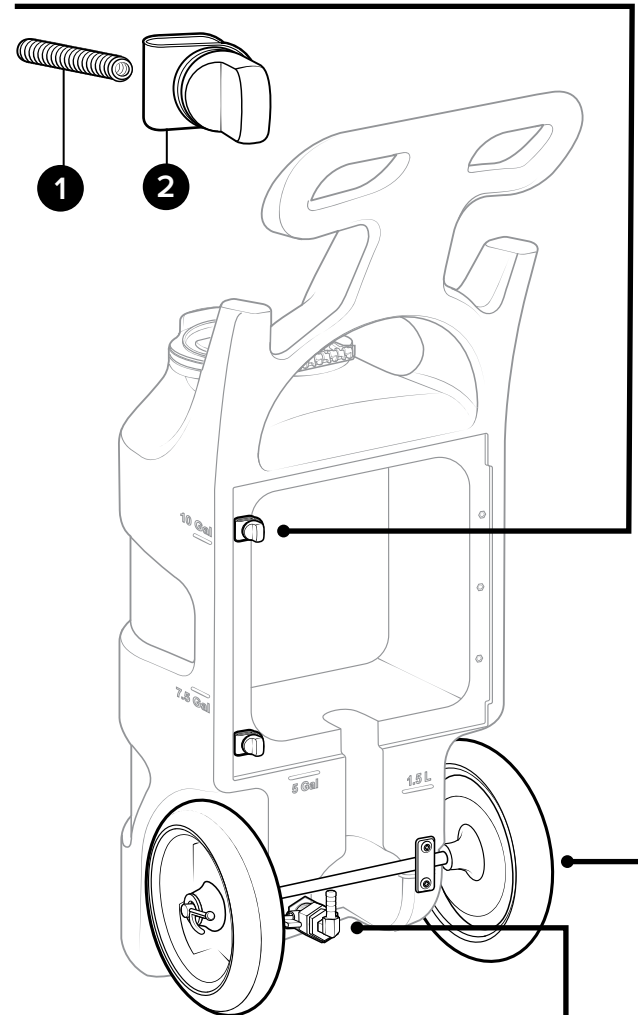
Item number	Description
3	BVPVC34MF Ball valve - PVC - ¾ NPT to ¾ FNPT - EPDM seal
4	HHPB3414 Hex head poly bushing ¾ MPT x ¼ FPT
5	HBSEL1438 Stainless hose barb ¼ MPT x ¾ barb elbow

WHLA-AXL14:

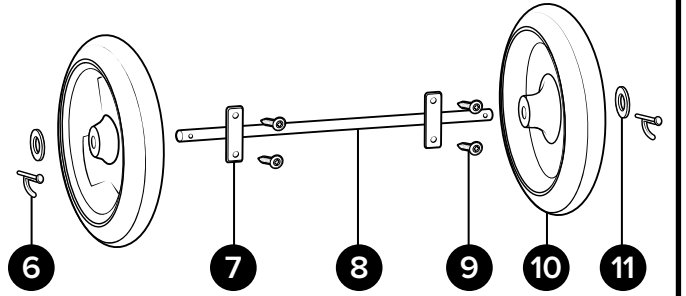
10 in. wheel assembly - includes 14 in. axle, axle plate, bolts, washers, and cotter pins

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	AXL14 Axle - stainless - 0.625 dia. x 14.5 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



VLVA-BVPVC34



WHLA-AXL14

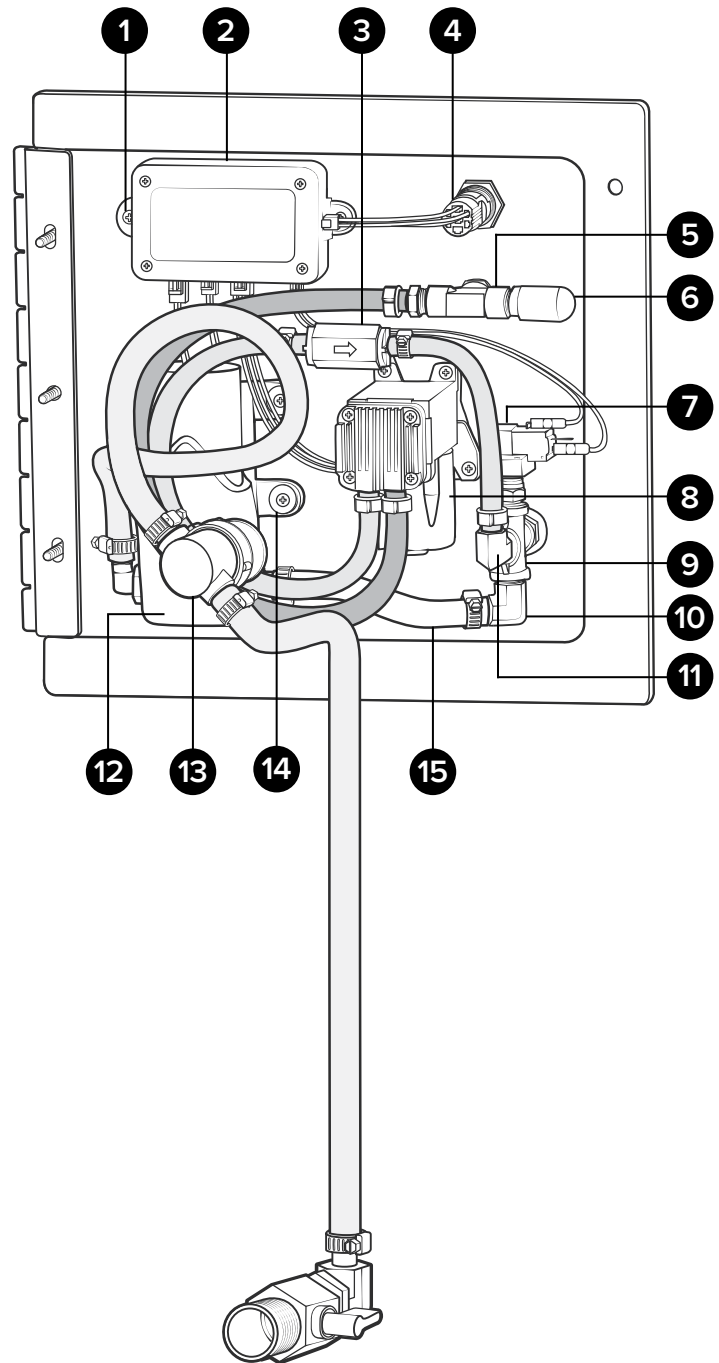
Back Plate Assembly

Inside view

PA-PF38-BP:

Plate assembly for portable foam battery unit - 24 Volt battery and air compressor - $\frac{3}{8}$ in. discharge hose barb

Item number	Description
1 S1034-HL	#10 x $\frac{3}{4}$ in. screw - stainless truss head Phillips - hi-lo thread
2 LVRC-24V-MC	Low voltage relay controller - 24 volt - with motor controller
3 CV14-HT	Check valve - $\frac{1}{4}$ in. barbs - 1 lb. - stainless spring and ball - Viton seals - PVC body - gray high temp
4 PBSA-24V	Push button switch assembly includes 24V LED locking switch and wire harness
5 NV14	Needle valve - $\frac{1}{4}$ in. NPT - includes black knob
6 MFLRPE14	$\frac{1}{4}$ in. male NPT muffler - polyethylene
7 PS14QFV-55	Pressure switch - $\frac{1}{4}$ quick fit - 55 psi - Viton membrane
8 AC24VDC-1.4-MLX	24 VDC electric air compressor 1.4 CFM open flow 80 psi max - includes Molex connector
9 SSCR14	SS cross $\frac{1}{4}$ in. FPT
10 HBSSEL1438	Stainless hose barb $\frac{1}{4}$ MPT x $\frac{3}{8}$ barb elbow
11 HBSSEL1414	Stainless hose barb $\frac{1}{4}$ MPT x $\frac{1}{4}$ barb elbow
12 EP24VDC-1MLX	24 VDC electric fluid pump - 1 GPM open flow - 40 psi max - Viton seals - Santo diaphragm includes Molex connector
13 STR38-IL	In-line strainer - $\frac{3}{8}$ barb - EPDM gasket - 20 mesh SS black bowl
14 FW8	Flat washer for #8 screw - stainless - 0.17 in. id x 0.63 in. od x 0.07 in. thk
15 H38BL-F	$\frac{3}{8}$ in. blue hose - hybrid TPE - available per ft.



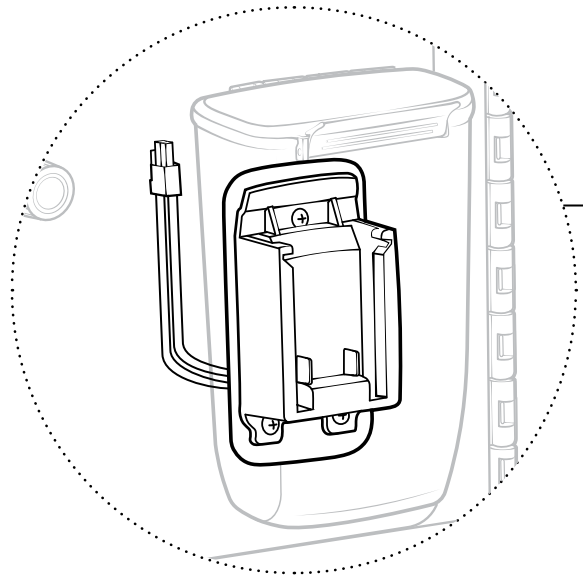
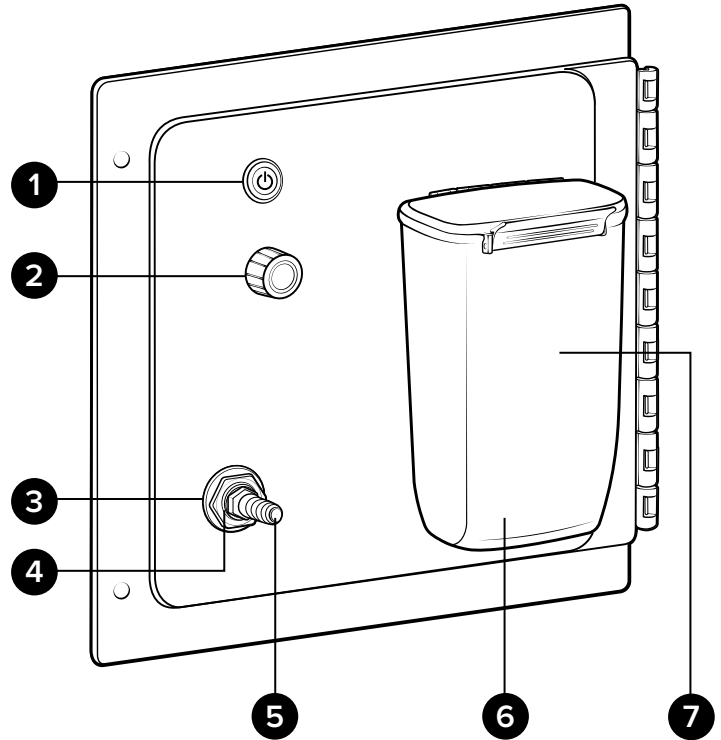
Back Plate Assembly

Back view

PA-PF38-BP:

Plate assembly for portable foam battery unit - 24V battery and air compressor - 3/8 in. discharge hose barb

Item number	Description
1	PBSA-24V Push button switch assembly - includes 24V LED locking switch and wire harness
2	NV14-HNDL Black knob for needle valve
3	SSSFN12 Serrated flange nut - stainless - 1/2 in.
4	SSA14BKH Bulkhead adapter - stainless - 1/4 NPT x 1/4 NPSM
5	HBSS1438 Stainless hose barb 1/2 MPT x 1/2 barb
6	BLI-24V-BB Battery box - includes box, lid, latch, pins, and gasket
7	BLI-24V-RCVR Battery receiver interface plate for BLI-24V system

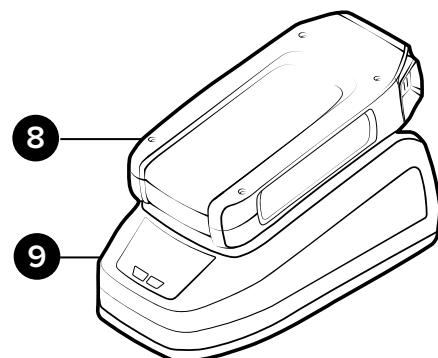


Battery and Charger*

*not included with backplate assembly

Item number	Description
8	BLI-24V-4AH Lithium ion battery - 24V 4Ah
9	BLI-24V-CHRGR Lithium ion battery charger - 24V - includes NA power cord

Note: Refer to battery and charger user manuals for more information.



*not included with backplate assembly

Back Plate Sub-assemblies

PSHA-BP:

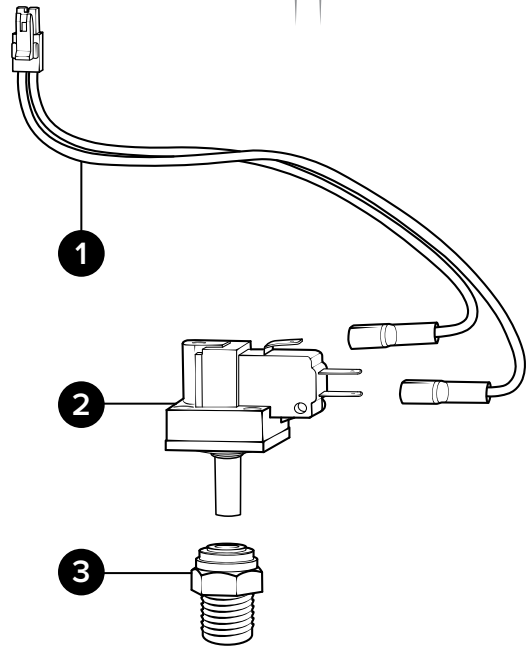
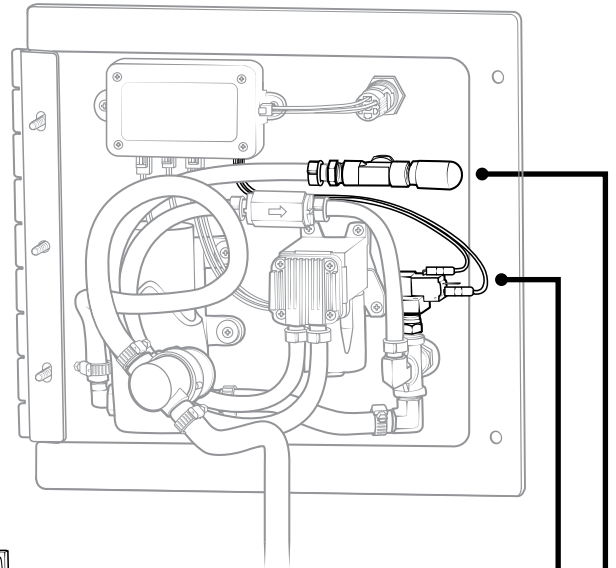
Pressure switch harness assembly - includes pressure switch, harness for 24V battery power, and quick fitting

Item number	Description	
1	PSH-BP	Pressure switch harness for 24V battery power
2	PS14QFV-55	Pressure switch - ¼ quick fit - 55 psi - Viton membrane
3	QF14P	Quick fit - ¼ MPT x ¼ od tube - polypropylene

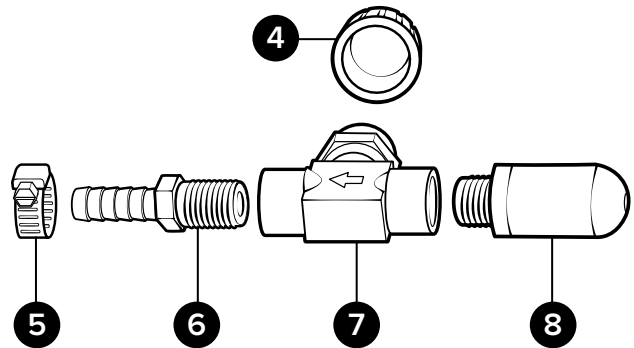
NVA-NV14-BP:

Needle valve assembly - includes needle valve, polyethylene muffler, hose barb, and screw band clamp

Item number	Description	
4	NV14-HNDL	Black knob for needle valve
5	SSC14	Stainless screw band clamp for ¼ in. hose
6	HBSS1414	Stainless hose barb ¼ MPT x ¼ barb
7	NV14	Needle valve - ¼ in. NPT - includes black knob
8	MFLRPE14	¼ in. male NPT muffler - polyethylene



PSHA-BP



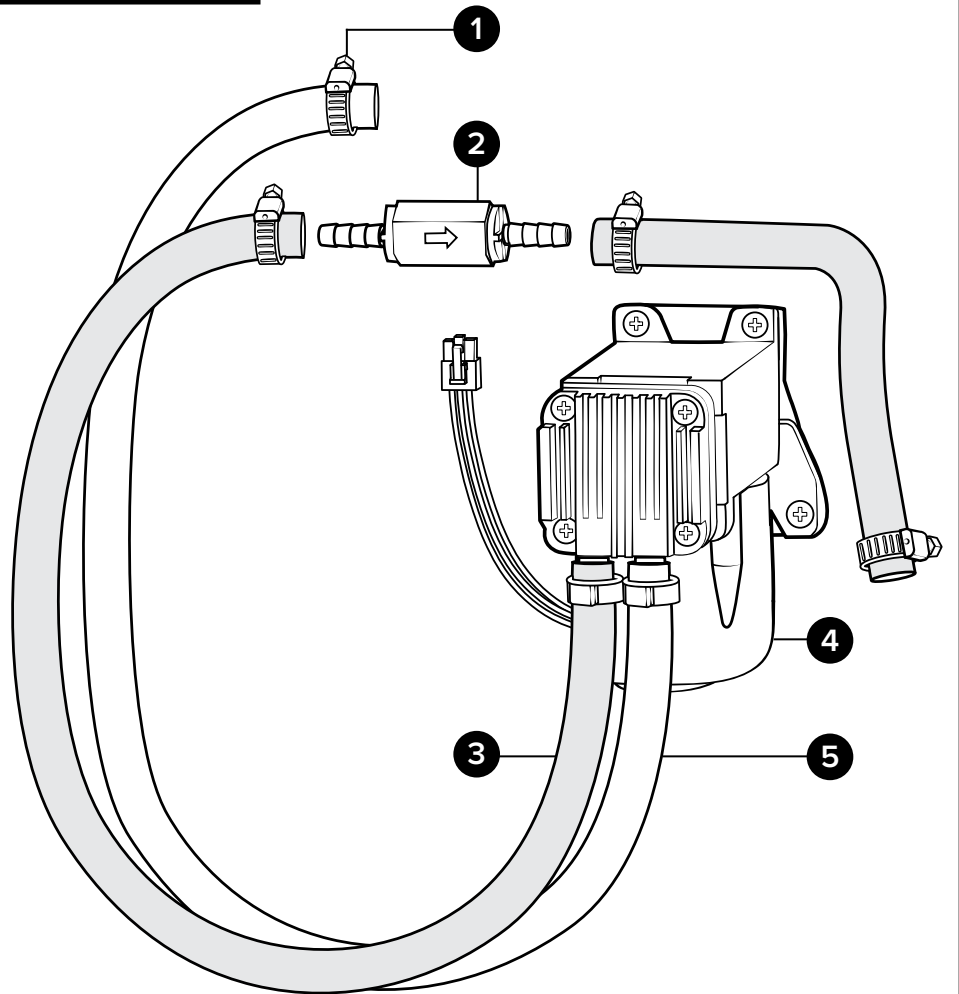
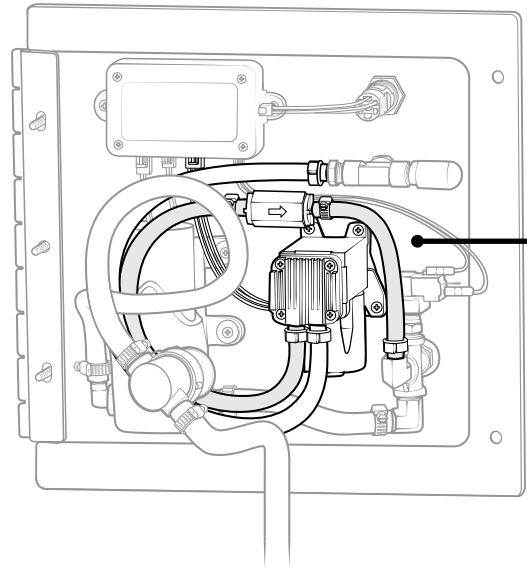
NVA-NV14-BP

Back Plate Sub-assemblies

ACA-AC24VDC-1.4:

Air compressor assembly - includes 24V air compressor, 1 lb. SS check valve, hoses, and screw band clamps

Item number	Description
1 SSC14	Stainless screw band clamp for ¼ in. hose
2 CV14-HT	Check valve - ¼ in. barbs - 1 lb. - stainless spring and ball - Viton seals - PVC body - gray - high temp
3 H14BK-HT	¼ in. black hose - high temp EPDM rubber - available per ft.
4 AC24VDC-1.4-MLX	24 VDC electric air compressor 1.4 CFM open flow - 80 psi max - includes Molex connector
5 H14BL-F	¼ in. blue hose - hybrid TPE - available per ft.



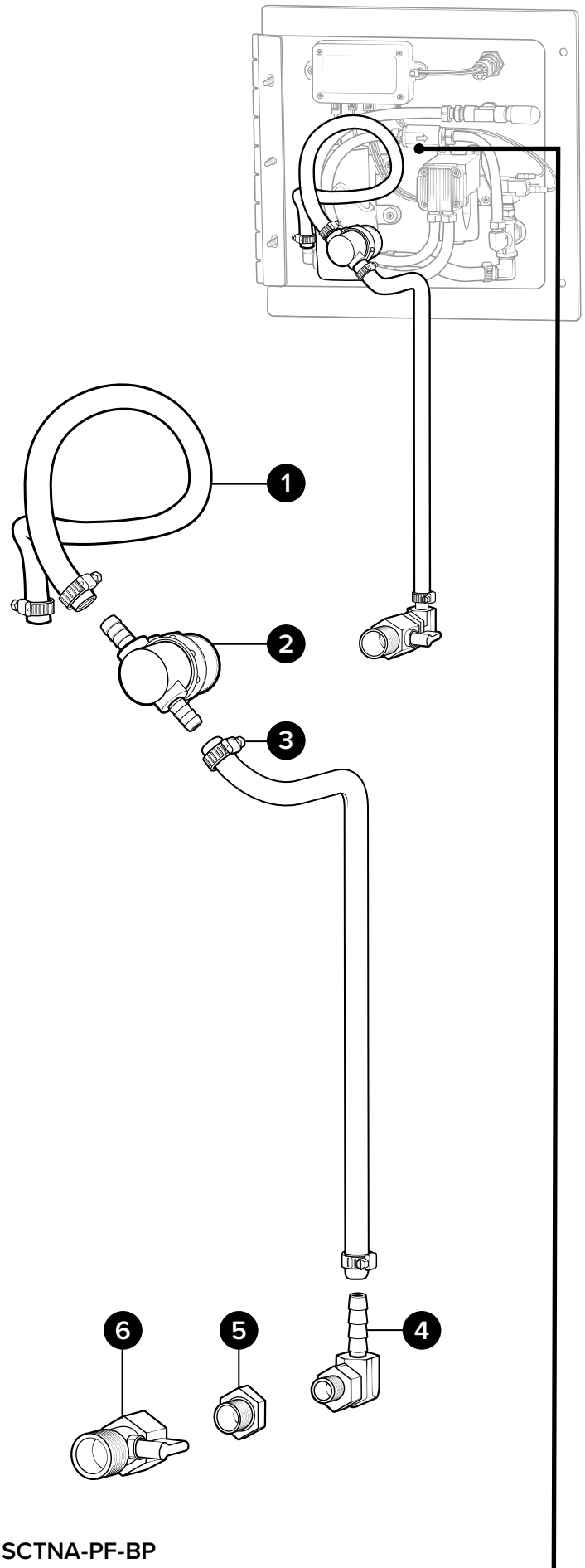
ACA-AC24VDC-1.4

Back Plate Sub-assemblies

SCTNA-PF-BP:

Suction assembly for battery equipped units - includes suction valve, hose, and in-line strainer

Item number	Description
1 H38BK-HT	3/8 in. black hose - high temp EPDM rubber - available per ft.
2 STR38-IL	In-line strainer - 3/8 barb - EPDM gasket - 20 mesh SS - black bowl
3 SSC38	Stainless screw band clamp for 3/8 in. hose
4 HBSSEL1438	Stainless hose barb 1/4 MPT x 3/8 barb elbow
5 HHPB3414	Hex head poly bushing 3/4 MPT x 1/4 FPT
6 BVPVC34MF	Ball valve - PVC - 3/4 NPT to 3/4 FNPT EPDM seal



SCTNA-PF-BP

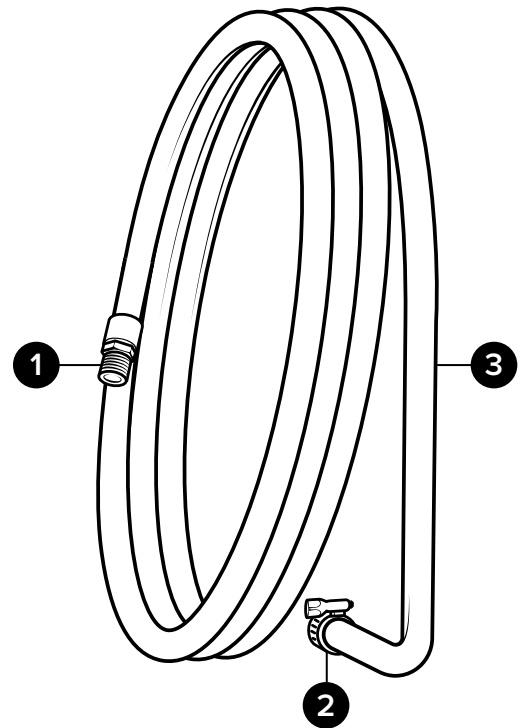
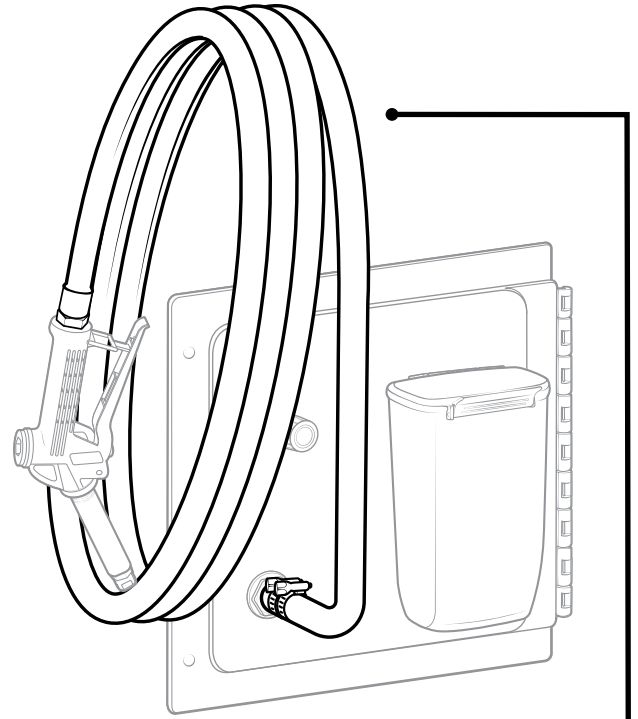
Hose Assembly

HA38BL-12:

Hose assembly - 12 ft. of $\frac{3}{8}$ in. blue* hose - includes ferruled hose barb

Item number	Description	
1	HBSS1238	Stainless hose barb $\frac{1}{2}$ MPT x $\frac{1}{2}$ barb
2	SSC38	Stainless screw band clamp for $\frac{3}{8}$ in. hose
3	H38BL-F	$\frac{3}{8}$ in. blue* hose - hybrid TPE - available per ft.

* Additional colors available, see datasheet for options.



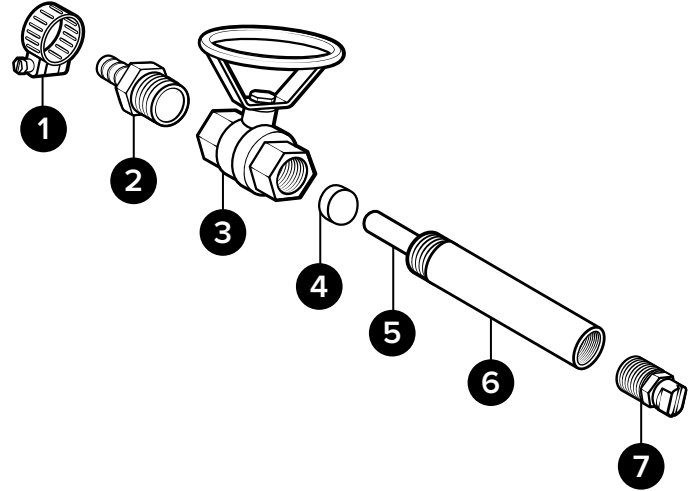
HA38BL-12

Wand Assembly Options

PWA384-ST-MX:

Poly wand assembly for 3/8 in. hose - includes 4 in. poly wand, ST8030SS spray tip, ball valve, and mixing media

Item number	Description
1	SSC38 Stainless screw band clamp for 3/8 in. hose
2	HBSS1238 Stainless hose barb 1/2 MPT x 3/8 barb
3	BVSS12 Stainless ball valve - 1/2 in. NPT
4	WAAD-.625 5/8 in. dia. wadding for foam units
5	TB38N-PE 3/8 in. od natural tube - polyethylene - available per ft.
6	PW12M14F4 1/2 in. NPT and 1/4 in. FNPT wand - black UHMW - 4 in. long
7	ST8030SS Spray tip - 80 degree - 3.0 gpm - stainless - 1/4 MPT



PSGA384-ST-MX:

Poly spray gun assembly for 3/8 in. hose - includes 4 in. black poly wand, ST8020SS spray tip, mixing media, hose barb, and screw band clamp

Item number	Description
8	ST8020SS Spray tip - 80 degree - 2.0 GPM - stainless - 1/4 MPT
9	PW12M14F4 1/2 in. NPT and 1/4 in. FNPT wand - black UHMW - 4 in. long
10	TB38N-PE 3/8 in. od natural tube - polyethylene - available per ft.
11	WAAD-.5 1/2 in. dia. wadding for foam units
12	WAAD-.625 5/8 in. dia. wadding for foam units
13	PSG12 Poly spray gun with 2x 1/2 in. straight thread - gray handle with red clip - 316SS internal spring - includes 2x o-ring
14	HBSS1238 Stainless hose barb 1/2 MPT x 3/8 barb
15	SSC38 Stainless screw band clamp for 3/8 in. hose

