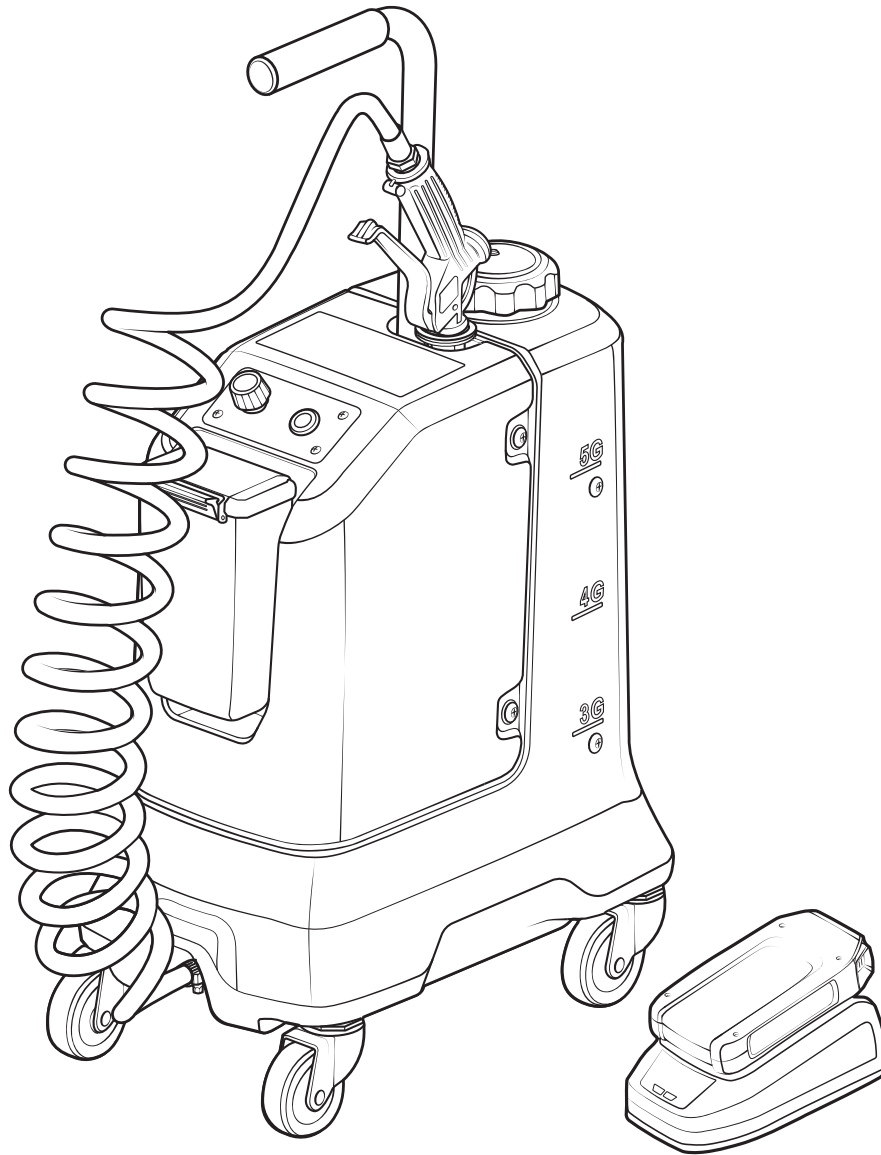


Battery Powered Rover Foam Unit

Service Manual

FI-BP-RVR



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.

The unit is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless given supervision or instructed in the safe use of the unit and understand the hazards involved. Children under 8 years old should be supervised to ensure they do not play with or handle the unit.



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 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.

Store unit and battery indoors in a cool, dry location between 32°-77°F (0°-25°C) and < 75% relative humidity. Do not store below 32°F (0°C) or above 113°F (45°C). To prevent premature battery failure, do not store battery in 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

The unit is not rated for high-altitude areas of 2000 meters and above.

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.

In the presence of radiated RF energies, the charge indicator button can lose functionality. Refer to the separate manuals supplied with the battery and charger for additional safety precautions and instructions.

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.



Model No.: FI-BP-RVR

Manufactured by: FOAMit

3833 Soundtech Ct. SE Grand Rapids, MI 49512 US

This equipment has been tested and found to comply with the limits for a **Class A** digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Service Guide

WARNING

Performing any maintenance with the unit pressurized, may result in serious injury or death. Always ensure the unit has been depressurized, and battery has been removed before conducting any maintenance. Cleaning and user maintenance shall not be made by children without supervision. Servicing or modifying 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.
- Remove and clean the holster of residue and debris.
- 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	• 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	• The check valve may need to be replaced. • Verify correct chemical concentration is being used. • If only fluid pump is running, electric air compressor may need to be replaced. • Check if wadding is plugged. Remove and inspect it by following the instructions below: 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. Note: Ensure tubing stays inside of wand when removing wadding. 5. Replace wadding if necessary. Attach wand back onto ball valve or spray gun.
Sporadic wet foam	• 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	• 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	• 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	• 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	• Battery has reached life expectancy. Replace battery.
Power button LED slow flashing	• Dead battery. Charge or replace battery.
Power button LED fast flashing	• Compressor startup failure. Reset with a power cycle. • A faulty pump or compressor may need to be replaced.
Power button LED double flashing	• Pump or compressor is over temperature. Allow unit to cool before use.
Battery/charger fault light is flashing	• Refer to the separate manuals supplied with the battery and charger for more information regarding indicator and fault lights.

Cover Assembly

CVRA-FI-BPRVR:

Cover assembly for battery powered Rover unit - natural - includes wire harness and battery box - battery and charger sold separately

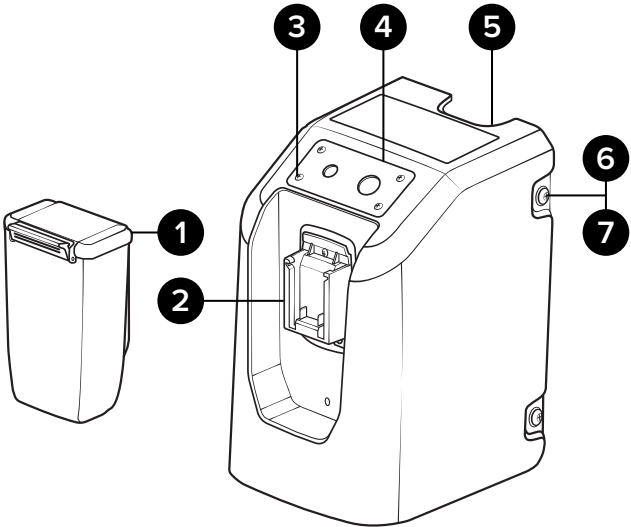
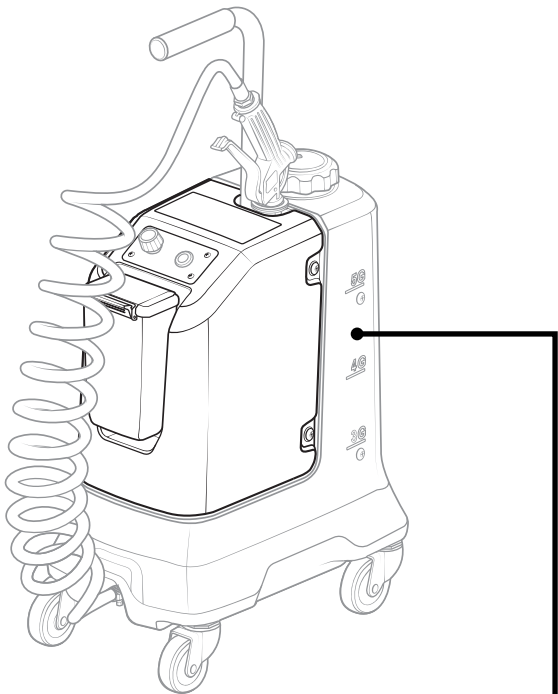
Item number		Description
1	BLI-24V-BB	Battery box - includes box, lid, latch, pins, and gasket
2	BLI-24V-RCVR-BPRVR	Battery receiver interface plate for BLI-24V system - Rover unit
3	S1034-HL	Screw - #10 x ¾ in. - stainless steel - round head Phillips - Hi-Lo thread
4	TRMPL-BPRVR	Trim plate - stainless steel - for BP Rover units
5	TNK-5N-BPRVR-CVR	5 Gallon natural rotomolded cover - for BP Rover units
6	B142012-VS	Bolt - ¼-20 x ½ in. - stainless steel - truss head Phillips - Vibra-Seal
7	FW1420-LG	Flat washer - stainless steel - large - 0.28 in. id x 0.75 in. od x 0.05 in. thk

Battery and Charger*

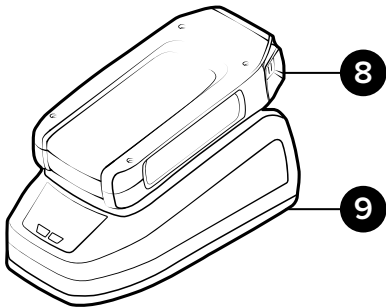
*not included with cover assembly

Item number		Description
8	BLI-24V-4AH	Battery - lithium ion - 24V 4AH - includes manual
9	BLI-24V-CHRGR	Battery - lithium ion - 24V - charger - includes NA power cord and manual

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



CVRA-FI-BPRVR



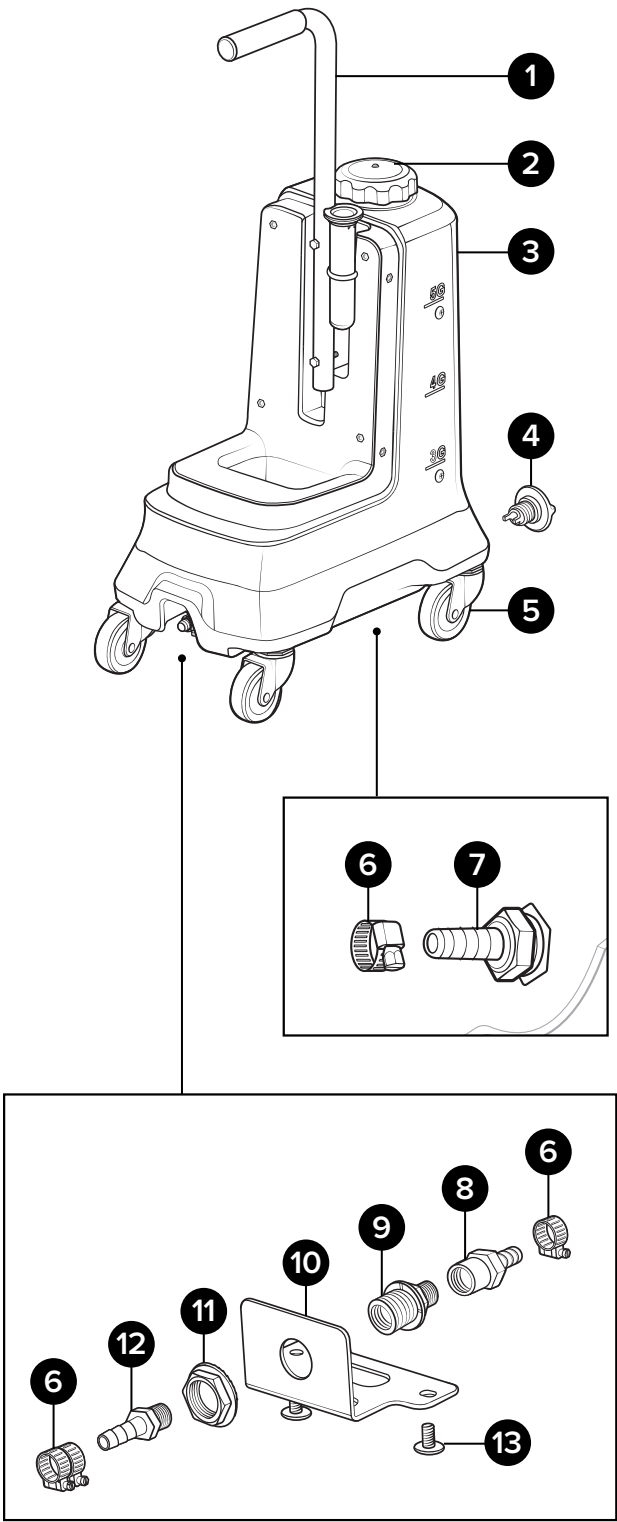
*not included with cover assembly

Tank Assembly

TNKA-5N-BK-RVR:

5 gallon natural tank assembly - black* cap - includes handle and caster wheels

Item number		Description
1	HNDLA-RVR	Handle assembly - includes handle, grip, holster, and mounting hardware
2	CPA-35BK-VNT-NCHN	Cap assembly - 3.5 in. PP - black* vented - EPDM check valve - EPDM gasket
3	TNK-5N-RVR	Tank - 5 gallon natural - Rover
4	DPA	Drain plug assembly - portable units - includes plug and gasket
5	CST3-38-RP-WWRNCH	Swivel caster - zinc plated steel - 3 in. TPR wheel - 3/8-16 male mounting post - replacement part including wrench
6	SSC38	Screw band clamp - stainless steel - for 3/8 in. hose
7	HBSS1238	Hose barb - stainless steel - 1/2 in. MPT x 3/8 in. barb
8	HBFSS1438	Hose barb - stainless steel - 1/4 in. FPT x 3/8 in. barb
9	SSA14BKH	Bulkhead adapter - stainless steel - 1/4 in. NPT x 1/4 in. NPSM
10	BRKT-EL-12-RVR	Bracket - L-shaped mounting - for 12 NPT fittings - for Rover - stainless steel
11	SSSFN12	Serrated stainless steel flange nut - 1/2 in.
12	HBSS1438	Hose barb - stainless steel - 1/4 in. MPT x 3/8 in. barb
13	B142012-VS	Bolt - 1/4-20 x 1/2 in. - stainless steel - truss head Phillips - Vibra-Seal



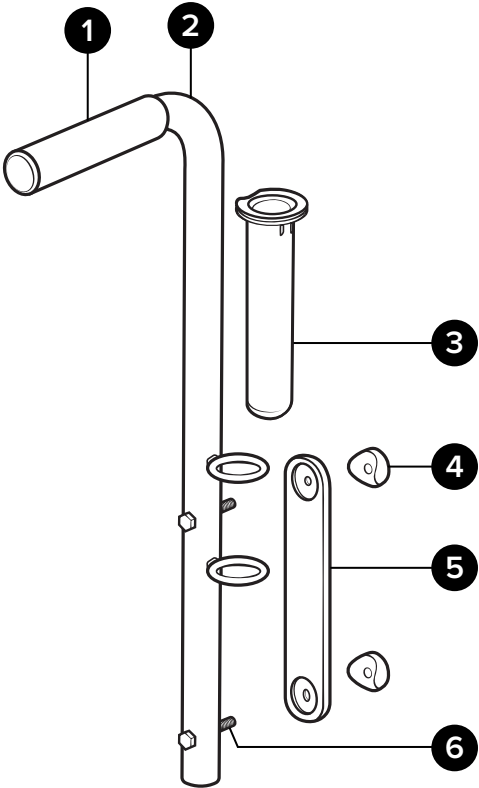
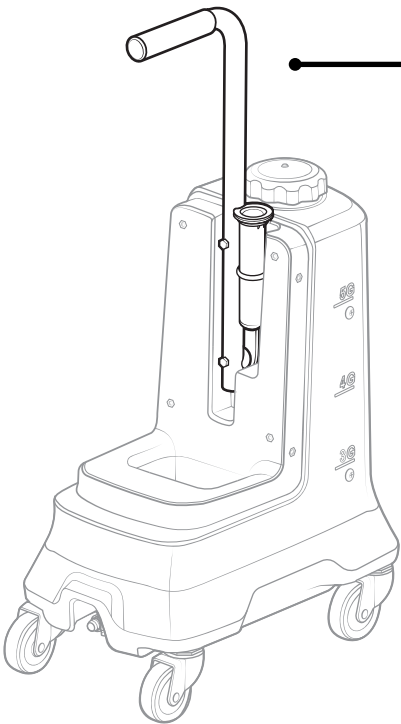
* Additional colors available, see datasheet for options.

Tank Sub-assembly

HNDLA-RVR:

Handle assembly - includes handle, grip, holster, and mounting hardware

Item number		Description
1	HBG-RVR	Handlebar grip for Rover unit
2	HNDL-RVR	Handle bar for Rover unit - stainless steel
3	HLSTR-WND	Holster for poly wand
4	SDLW-NYL	Saddle washer for 1 in. od tube - 1/4-20 bolt size - nylon
5	PL-HNDL-RVR	Plate for equip series rover handle - PL-4x8
6	B1420134-HH	Bolt - 1/4-20 x 1 3/4 in. - stainless steel - hex head



HNDLA-RVR

Plate Assembly

PLA-FI-BPRVR:

Plate assembly for battery powered portable Rover foam unit with $\frac{3}{8}$ in. hose

Item number		Description
1	NV14	Needle valve - $\frac{1}{4}$ in. NPT - includes black knob
2	PBSA-24V-RVR	Push button switch assembly includes 24V LED locking switch and wire harness - for FI-BP Rover units
3	LVRC-24V-MC	Low voltage relay controller - 24 volt - with motor controller
4	B1420114-PH	Bolt - $\frac{1}{4}$ -20 x 1 $\frac{1}{4}$ in. - stainless steel - pan head Phillips
5	FW1420-LG	Flat washer - stainless steel - large - 0.28 in. id x 0.75 in. od x 0.05 in. thk
6	SPC10X12-PE	Spacer - 1 in. od x $\frac{1}{2}$ in. long - for $\frac{1}{2}$ in. screw - polyethylene
7	PL-BPRVR	Plate for component mounting - battery power - Rover unit
8	AC24VDC-1.4-MLX	Air compressor - 24 VDC electric - 1.4 CFM open flow - 80 PSI max - includes molex connector
9	MFLRPE14	Muffler - $\frac{1}{4}$ in. male NPT - polyethylene
10	H14BK-HT	$\frac{1}{4}$ in. black hose - high temp EPDM rubber - available per ft.
11	SSC38	Screw band clamp - stainless steel - for $\frac{3}{8}$ in. hose
12	CV14-HT	Check valve - $\frac{1}{4}$ in. barbs - 1 lb stainless steel spring and ball - Viton seals - polypropylene body - black - high temp
13	EP24VDC-1-PS-MLX	Electric fluid pump - 24 VDC - 1 GPM open flow - 40 PSI max - Viton seals - Santo diaphragm includes pressure switch and molex connector
14	H38BL-F	$\frac{3}{8}$ in. id blue hose - hybrid TPE available per ft.
15	STR38-IL-80	In line strainer - 2x $\frac{3}{8}$ hose barb - EPDM gasket - #80 mesh stainless steel screen - gray bowl

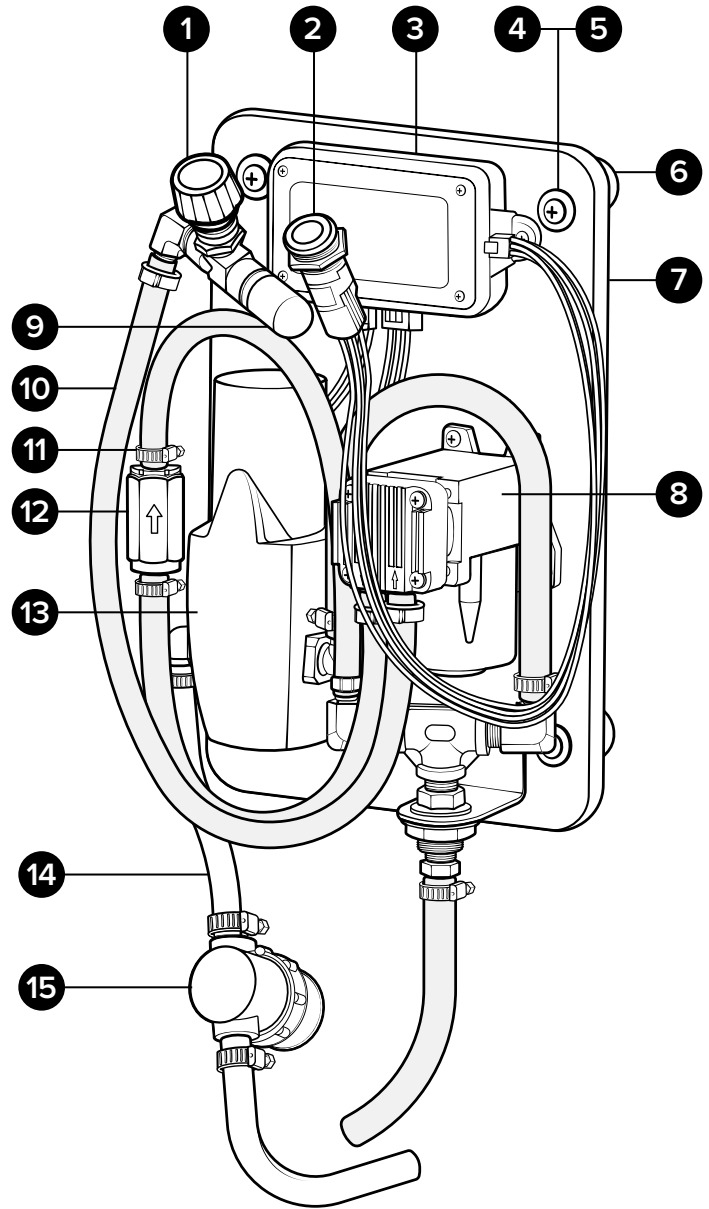


Plate Assembly

Continued

PLA-FI-BPRVR:

Plate assembly for battery powered portable Rover foam unit with 3⁄8 in. hose

Item number	Description	
16	H14BK-HT	¼ in. black hose - high temp EPDM rubber - available per ft.
17	HBSEL1414	Hose barb - stainless steel - elbow - ¼ in. MPT x ¼ in. barb
18	SSA14BKH	Bulkhead adapter - stainless steel - ¼ in. NPT x ¼ in. NPSM
19	SSSFN12	Serrated stainless steel flange nut - ½ in.
20	HBSS1438	Hose barb - stainless steel - ¼ in. MPT x 3⁄8 in. barb
21	H38BK-HT	3⁄8 in. black hose - high temp EPDM rubber - available per ft.
22	SST14	Stainless tee ¼ FPT
23	SSC38	Screw band clamp - stainless steel - for 3⁄8 in. hose
24	HBSEL1438	Hose barb - stainless steel - elbow - ¼ in. MPT x 3⁄8 in. barb
25	S1034-HL	Screw - #10 x 3⁄4 in. - stainless steel - round head Phillips - Hi-Lo thread
26	BRKT-EL-BVSEL	Bracket - L-shaped mounting - stainless steel

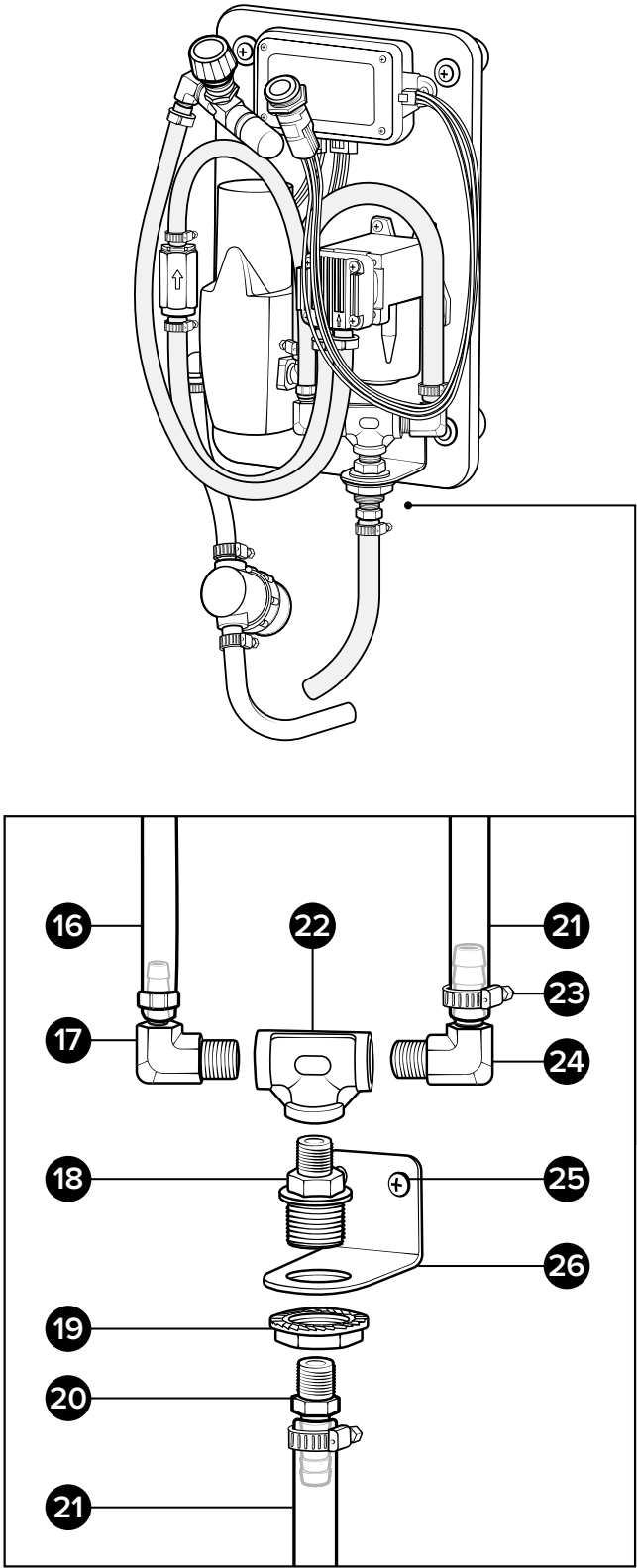


Plate Sub-assemblies

SCTNA-BPRVR:
suction assembly for portable Rover units - includes
3/8 in. hose, screw band clamp, and in-line strainer

Item number		Description
1	SSC38	Screw band clamp - stainless steel - for 3/8 in. hose
2	STR38-IL-80	In line strainer - 2x 3/8 hose barb - EPDM gasket - #80 mesh stainless steel screen - gray bowl
3	H38BL-F	3/8 in. id blue hose - hybrid TPE available per ft.

NVA-NV14-BP-EL:
Needle valve assembly - includes needle valve,
polyethylene muffler, hose barb, and screw band clamp

Item number		Description
4	HBSSEL1414	Hose barb - stainless steel - elbow - 1/4 in. MPT x 1/4 in. barb
5	SSC14	Screw band clamp - stainless steel - for 1/4 in. hose
6	NV14-HNDL	Black knob for needle valve
7	NV14	Needle valve - 1/4 in. NPT - includes black knob
8	MFLRPE14	Muffler - 1/4 in. male NPT - polyethylene

SCTNA-BPRVR

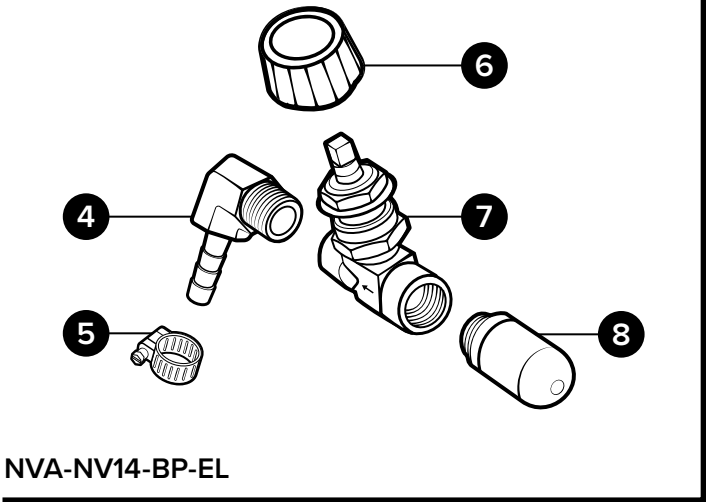
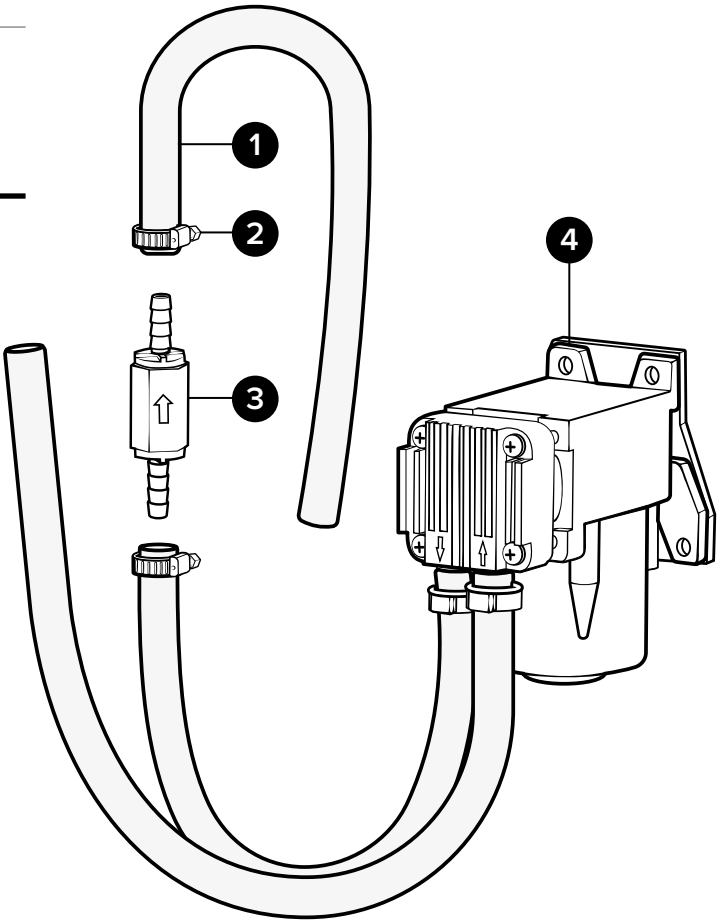
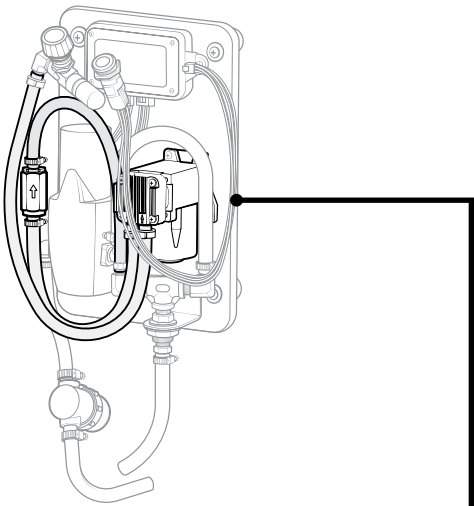


Plate Sub-assemblies

ACA-AC24VDC-1.4-RVR:

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

Item number	Description	
1	H14BK-HT	¼ in. black hose - high temp EPDM rubber - available per ft.
2	SSC14	Screw band clamp - stainless steel - for ¼ in. hose
3	CV14-HT	Check valve - ¼ in. barbs - 1 lb stainless steel spring and ball - Viton seals - polypropylene body - black - high temp
4	AC24VDC-1.4-MLX	Air compressor - 24 VDC electric - 1.4 CFM open flow - 80 PSI max - includes molex connector



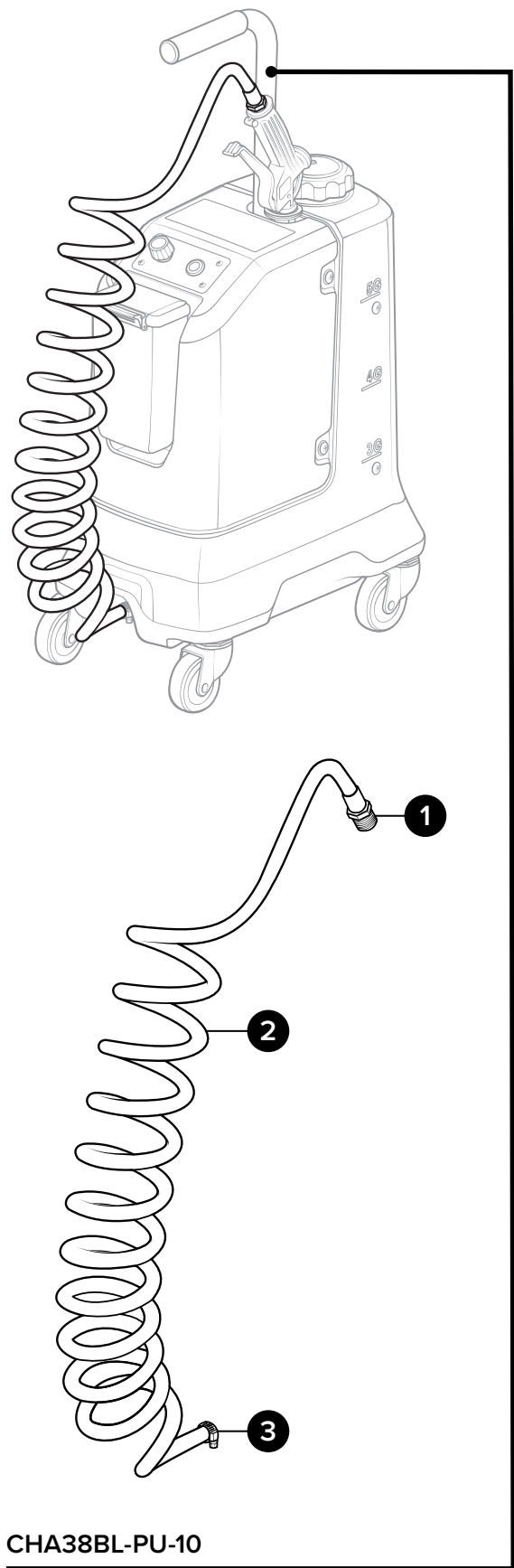
ACA-AC24VDC-1.4-RVR

Hose Assembly

Coiled

CHA38BL-PU-10:
Coiled hose assembly - 10 ft. of coiled 3/8 in. blue polyurethane hose - includes SS ferruled hose barb, and screw band clamp

Item number		Description
1	HBSS1238	Hose barb - stainless steel - 1/2 in. MPT x 3/8 in. barb
2	CH38BL-PU-10	3/8 in. id coiled blue hose - polyurethane - 10 ft. reach
3	SSC38	Screw band clamp - stainless steel - for 3/8 in. hose



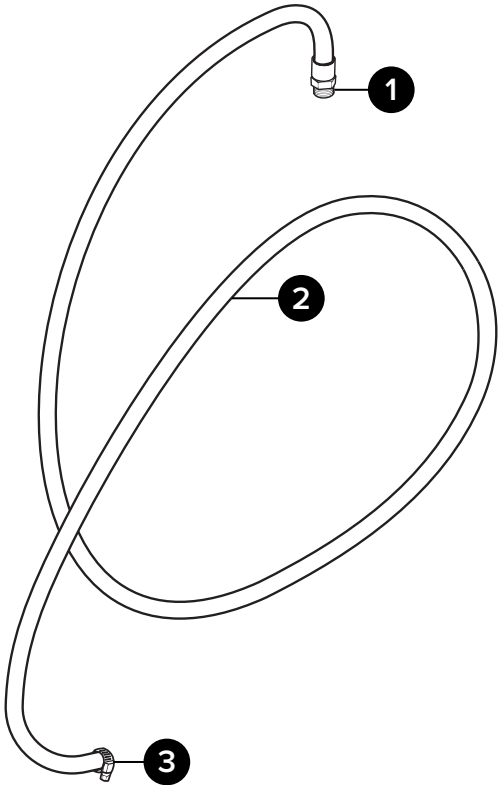
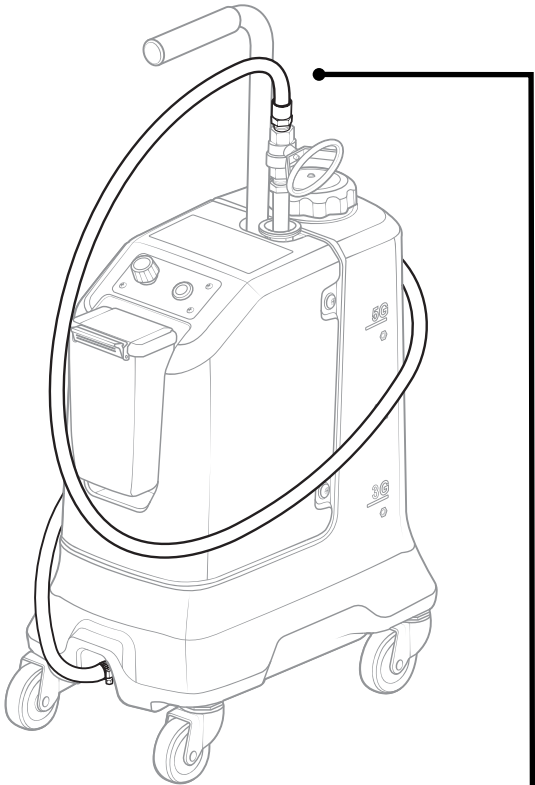
Hose Assembly

Straight

HA38BL-8:
Hose assembly - 8 ft. of 3/8 in. blue* hose - includes
SS ferruled hose barb, and screw band clamp

Item number		Description
1	HBSS1238	Hose barb - stainless steel - 1/2 in. MPT x 3/8 in. barb
2	H38BL-F	3/8 in. id blue* hose - hybrid TPE - available per ft.
3	SSC38	Screw band clamp - stainless steel - for 3/8 in. hose

* Additional colors available



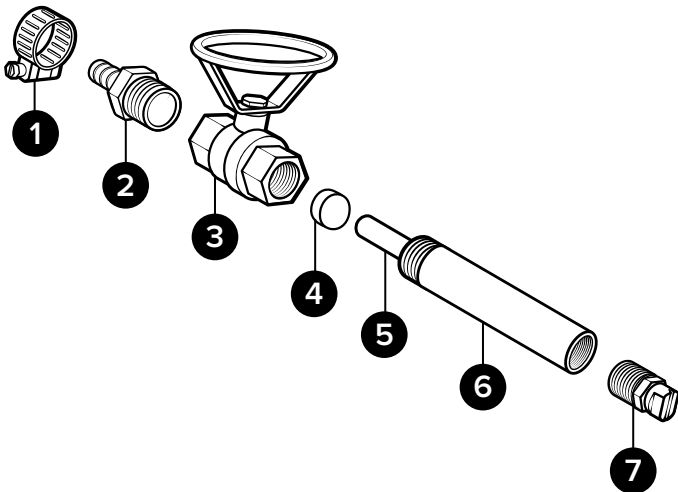
HA38BL-8

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

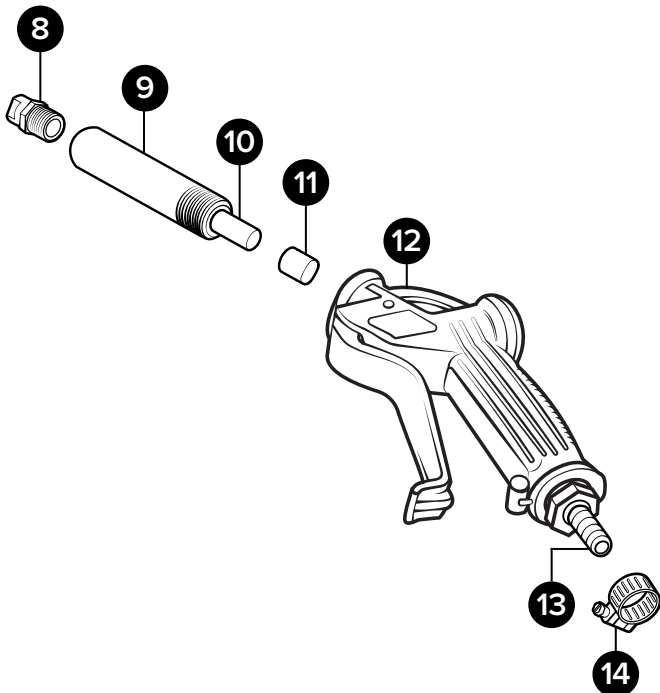
Item number		Description
1	SSC38	Screw band clamp - stainless steel - for 3/8 in. hose
2	HBSS1238	Hose barb - stainless steel - 1/2 in. MPT x 3/8 in. barb
3	BVSS12	Stainless ball valve - 1/2 in. NPT
4	MXPES-34	Mixing media - white polyester - wad - fine porosity - 3/4 in. dia x 7/8 in. tall
5	TB38N-PE	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, ST8030SS spray tip, mixing media, hose barb, and screw band clamp

Item number		Description
8	ST8030SS	Spray tip - 80 degree - 3.0 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	MXPES-34	Mixing media - white polyester - wad - fine porosity - 3/4 in. dia x 7/8 in. tall
12	PSG12	Poly spray gun with 2x 1/2 in. straight thread - gray handle with red clip - 316SS internal spring - includes 2x o-ring
13	HBSS1238	Hose barb - stainless steel - 1/2 in. MPT x 3/8 in. barb
14	SSC38	Screw band clamp - stainless steel - for 3/8 in. hose



Tray and Shelf Accessories

TRAYA-RVR:

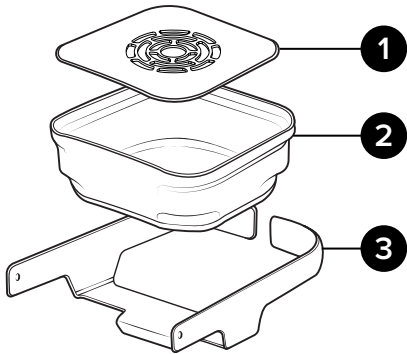
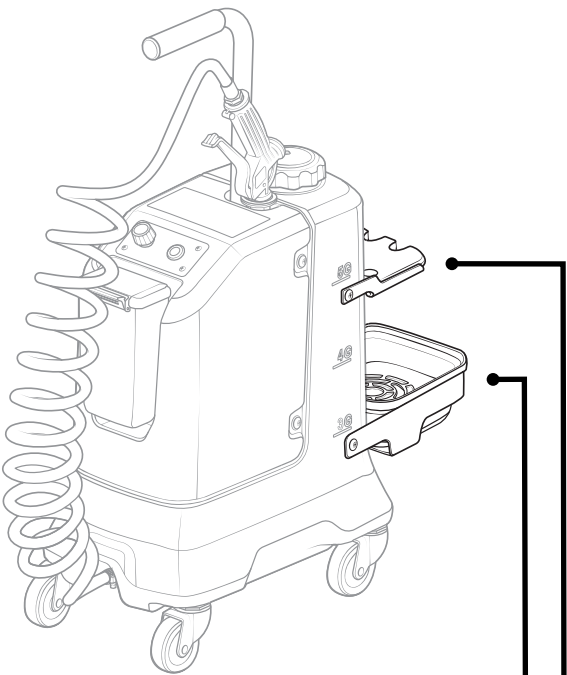
Lower tray assembly for Rover unit - includes mounting bracket, tray, and stainless steel tray insert

Item number		Description
1	PLSS-TRAY-RVR	Plate - stainless steel - tray insert - for Rover
2	TRAY-RVR	Lower tray - Rover - black HDPE
3	BRKT-TRAY-RVR	Bracket - lower tray - Rover - stainless steel

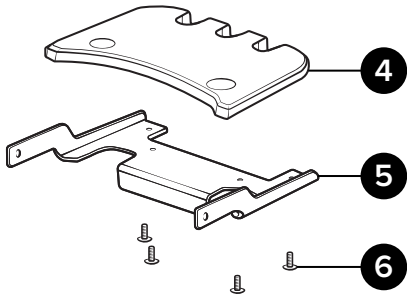
SHFA-RVR:

Upper shelf assembly for Rover unit - includes mounting bracket, screws, and plate

Item number		Description
4	PL-SHF-RVR	Plate - attachment shelf - Rover - PL-4x8-1/2 - starboard
5	BRKT-SHF-RVR	Bracket - attachment shelf - Rover - stainless steel
6	S1012-HL	Screw - #10 x 1/2 in. - stainless steel - round head Phillips - Hi-Lo thread



TRAYA-RVR



SHFA-RVR

Drain Foam Accessories

Drain Plunger:

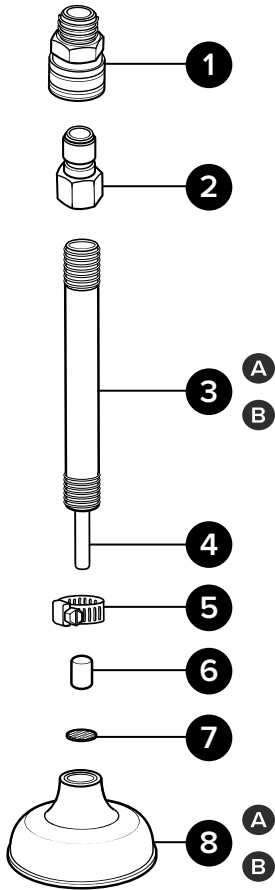
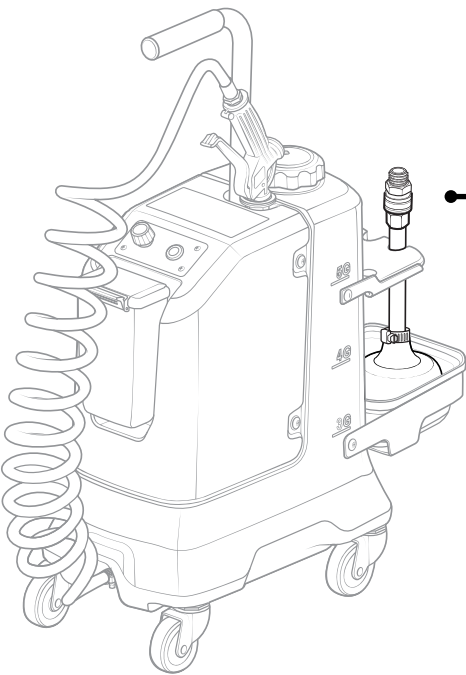
Includes mixing media and stainless steel quick connect

Options:

DFA-PLG4-6-QC: 4 1⁄8 in. dia plunger with 6 in. poly wand

DFA-PLG5-18-QC: 5 1⁄4 in. dia plunger with 18 in. poly wand

Item number		Description
1	QCSS12M-SCKT	Quick connect socket - SS body - 1⁄2 in. MNPT - no check
2	QCSS12F-PLG	Quick connect plug - SS body - 1⁄2 in. FNPT - no check
3	A PN126	1⁄2 in. NPT pipe nipple - black polypropylene - 6 in. long
	B PN1218	1⁄2 in. NPT pipe nipple - black polypropylene - 18 in. long
4	TB38N-PE	3⁄8 in. od natural tube - polyethylene - available per ft.
5	SSC34	Screw band clamp - stainless steel - for 3⁄4 in. hose
6	MPES-34	Mixing media - white polyester - wad - fine porosity - 3⁄4 in. dia x 7⁄8 in. tall
7	STRD1116	Strainer - stainless disc - 1 1⁄16 in. dia - #10 mesh
8	A PLG12-4	Drain plunger - for 1⁄2 in. NPT pipe - black rubber - 4 1⁄8 in. dia
	B PLG12-5	Drain plunger - for 1⁄2 in. NPT pipe - black rubber - 5 1⁄4 in. dia



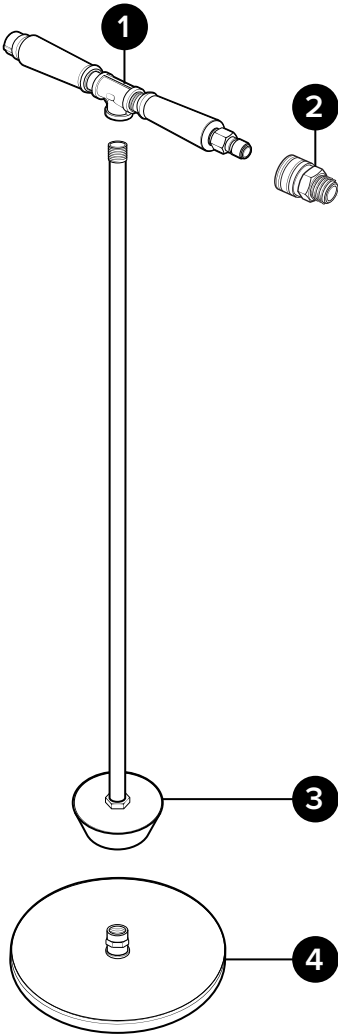
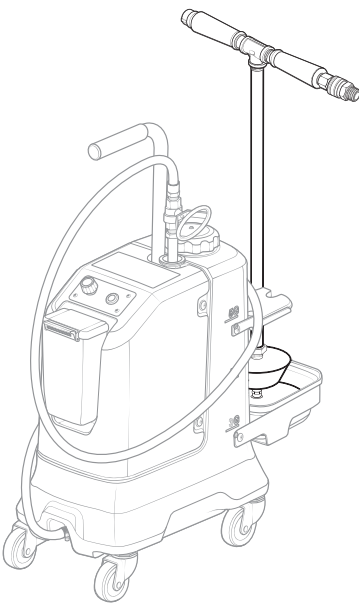
DFA-PLG4-6-QC
DFA-PLG5-18-QC

Drain Foam Accessories

DFA-D7-36:

Drain foam attachment - includes 7 in. diameter disc, 36 in. tall wand with drain stopper, T-bar handle with mixing media, and SS quick connects

Item number		Description
1	HNDLA-DF-QC	Handle assembly for drain foam - T-bar - includes quick connect fitting
2	QCSS12M-SCKT	Quick connect socket - SS body - ½ in. MNPT - no check
3	WA-DF-36	Wand assembly - 36 in. tall with size 14 foot stop - for drain foam attachment
4	DSCA-D7	Disc assembly - includes 7 in. diameter stainless disc, stainless steel bushing, coupler, foam ring, and washer



DFA-D7-36