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# **USER MANUAL**

**MODEL NUMBER:  
FI-50N  
FI-50NK  
FI-50NV  
AND RELATED UNITS**

**50 Gallon Air Operated Portable Foam  
Unit**

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**English (Original Instructions)**

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## READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

# **WARNING**



### **Read this manual completely and understand the machine before operating or servicing it.**

- Read all instructions before installing or operating unit.
- Always wear appropriate personal protective equipment (PPE) when operating or servicing unit.
- Always follow all chemical safety precautions and handling instructions provided by the chemical manufacturer and Material Safety Data Sheet (MSDS).
- If this unit is modified or serviced with parts not listed in this manual, the unit may not operate correctly.
- Never point the discharge wand at yourself, another person, or any object you do not want covered in chemical.
- Always depressurize unit after use (as described in the After Use Instructions). Always store unit depressurized, with the discharge ball valve in the closed position.
- Do not exceed an incoming air pressure of 100 psi (7 bar).
- Do not exceed a fluid temperature of 100°F (37°C).
- Always flush the unit with fresh water for 5 minutes when switching from an alkaline to an acid or an acid to an alkaline.
- Never use unit with hydrocarbons or flammable products.
- Only use clean and dry air. Air must be filtered and free of moisture or pump life will be diminished. If needed, install an air dryer before unit.
- Do not use an air lubricator 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.



Always remember to recycle.

\*Specifications and parts are subject to change without notice.

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OPTIONS	
	Pump Seal Material
FI-50N	Santoprene ( <b>standard</b> )
	Viton ( <b>V</b> )
	Kalrez ( <b>K</b> )

Add bold option codes to item number as shown. For standard options, no option code is needed.

Examples:

- FI-50N (standard unit with Santoprene pump seals)
- FI-50NV (unit with Viton pump seals)

REQUIREMENTS	
Compressed air requirements	40-80 psi (3-5 bar) with 5-10 cfm (141-283 l/min)
Liquid temperature range	40-100°F (4.4-37°C)
Chemical compatibility	Chemical products used with this equipment must be formulated for this type of application and compatible with unit materials and pump seals. For more information on chemical compatibility, consult the manufacturer or MSDS for your product or contact our customer service department.

SPECIFICATIONS	
Power type	Compressed air
Chemical pickup type	Draws from pre-mixed solution
Number of products unit can draw from	One product
Suction line length/diameter	3/8 in. (9.5 mm) inside diameter
Capacity	50 gallons (189.27 liters)
Discharge hose diameter/length	50 ft. (15.24 m) hose, with 3/4 in. (19 mm) inside diameter
Discharge wand/tip type	7 in. (17.8 cm) stainless steel wand with zero tip and ball valve
Output distance	25-30 ft. (7-9 m)
Output volume	20-45 gal/min (75-170 l/min) of foam
Flow rate*	2 gal/min (7.6 l/min)
Pump seals	Santoprene, Viton, or Kalrez
Wheel type	Two 10 inch non-marking wheels, two 5 inch casters with lock

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

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### Operation Instructions:

1. Follow all instructions from chemical manufacturer. Fill the tank with water and the advised percentage of chemical concentrate.
2. With ball valve (HV60) in the closed position, plug an air line into the air fitting (AP25).
3. Slowly open the ball valve (HV60) completely.
4. Adjust the needle valve (NV14Y) to desired wetness or dryness of foam following the steps below:
  - a. Close needle valve completely in clockwise direction.
  - b. Open needle valve in counter-clockwise direction 3 complete turns.
  - c. Continue to open valve in ¼ turn increments allowing 30 seconds between adjustments until proper consistency of foam is achieved.

### After Use Instructions:

1. Flush the unit with fresh water for 5 minutes.
2. Disconnect the air line from the air fitting (AP25) and relieve any remaining pressure in the system by opening the discharge ball valve (HV60).
3. Close the ball valve (HV60) after all pressure has been relieved from the system.

### Maintenance Instructions:

To keep your portable tank foamer operating properly, periodically perform the following maintenance procedures:

- Check the air pump (P56/P56K/P56V) for wear and leaks.
- Inspect hoses for leaks or excessive wear. Make sure all hose clamps are in good condition and properly secured.
- Replace filter (AFR25) in regulator (R25) as needed.
- Check the suction tube and screen for debris and clean as needed.
- Drain compressor tank on a regular basis to ensure proper operation of pump.

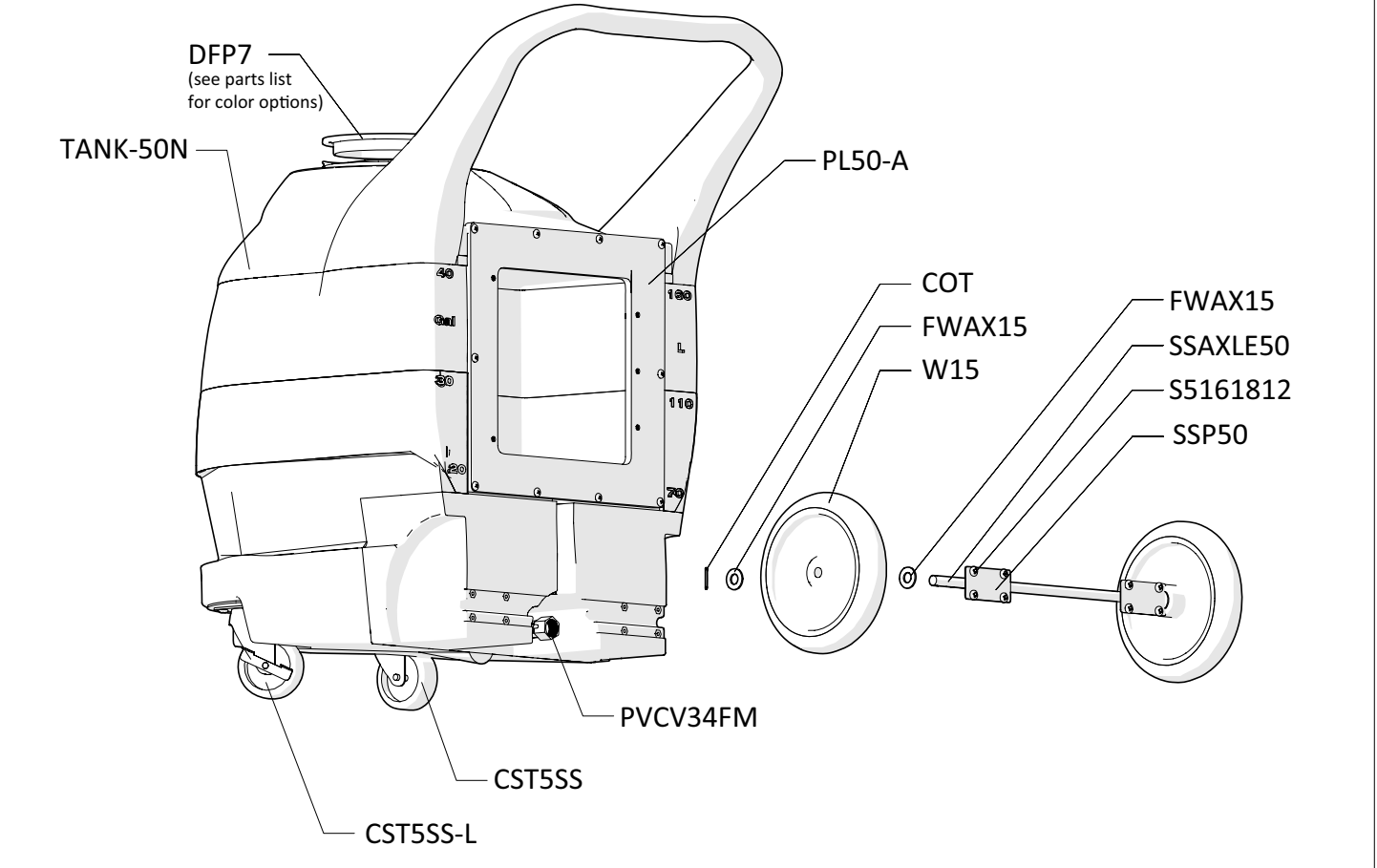
### Troubleshooting Instructions:

- Check to ensure the discharge hose is uncoiled properly, and that there are no kinks that could obstruct fluid flow.
- Check air regulator bowl (ABR25) for debris such as water, oil, or rust particles. Clean by unthreading the air regulator bowl from the air regulator (R25).
- If needle valve (NV14Y) valve is open too far, the pump (P56/P56K/P56V) will cycle improperly due to lack of air pressure. If this occurs, reset needle valve as described in Operation Instruction #4.
- Make sure proper foaming chemical and concentration is being used.

- If air passes through the pump (P56/P56K/P56V) without cycling, the pump needs to be replaced.
- If foam solution backs up into air regulator bowl (ABR25), the check valve (CV38) needs to be replaced.
- If foam comes out wet, no matter where the needle valve (NV14Y) is positioned, the check valve (CV38) may need to be replaced.
- Check for proper air pressure on air gauge (AG100). Air regulator (R25) is factory set at 50 psi (3.4 bar). Operating range is 40 to 80 psi (3 to 5 bar) with 5 to 10 CFM (141 to 283 l/min)
- If the unit foams at a reduced pressure:
  - o Check the air compressor supplying the unit. If the pressure is less than 40 psi, turn the foam unit off until the compressor can catch up.
  - o If the air supply is 50 psi (4.14 bar) or above, check the AG100, which should read near 50 psi (4.14 bar). If the AG100 is more or less than 50 psi (4.14 bar), adjust the pressure by turning the knob on the top of the air regulator (R25).
  - o If both of the above are okay, the stainless steel mixing mesh (SS-MESH) could be plugged. Remove and clean it by following the instructions below:
    1. Be sure the foam unit is not plugged into an air supply and be sure to relieve all stored pressure in the unit by having the ball valve (HV60) in the open position.
    2. Remove the stainless adaptor (SSA12) from the tee fitting (SST12HB38).
    3. Remove the screen and the mixing mesh from inside the tee fitting (SST12HB38).
    4. Clean any particles from the mixing mesh and the screen.
    5. Replace the mixing mesh and then the screen into the back of the tee and screw the stainless adaptor back into the tee. It is recommended to use a pipe thread sealant when reinstalling the stainless adaptor back into the tee fitting (SST12HB38). If the mixing mesh has a lot of foreign particles in it, make sure the strainer (STR38-IL) is still in place.
- Check for plugged strainer (STR38-IL). Replace strainer if necessary. Strainer must be used.

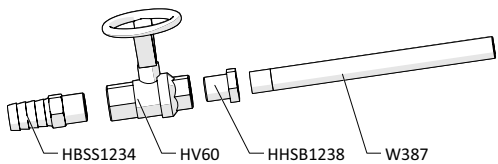
**READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT**

**TANK ASSEMBLY  
ITEM NUMBER: TANK-50N-A**

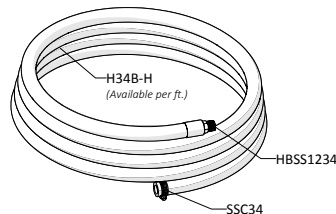


**HOSE AND WAND ASSEMBLY  
ITEM NUMBER: SSWA38-HA50**

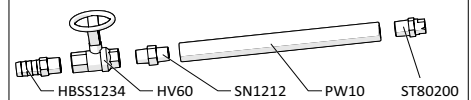
**ZERO TIP FOAM WAND ASSEMBLY  
ITEM NUMBER: SSWA38**



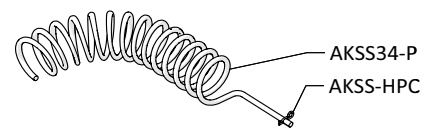
**50 ft (15.2 m) HOSE ASSEMBLY  
ITEM NUMBER: H34-50**



**FAN TIP FOAM WAND ASSEMBLY  
ITEM NUMBER: PWA34-ST**



**ANTI-KINK SPRING ASSEMBLY  
ITEM NUMBER: AKSS34**



**READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT**

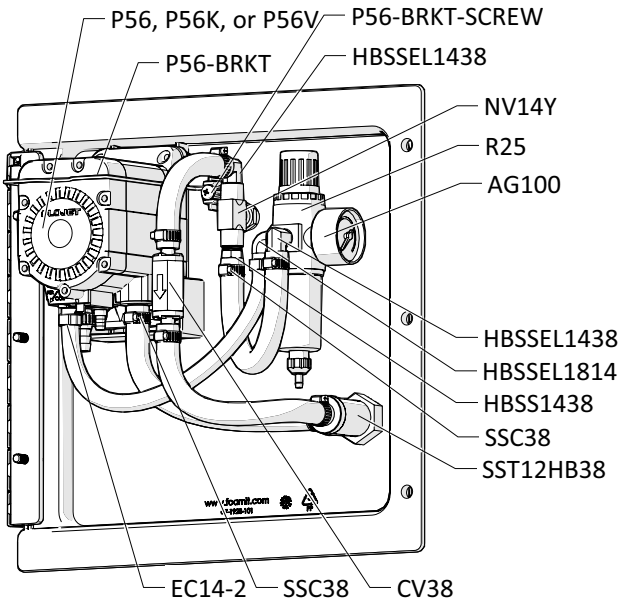
**PLATE ASSEMBLY**

**ITEM NUMBER (Santoprene pump): PA-PF**

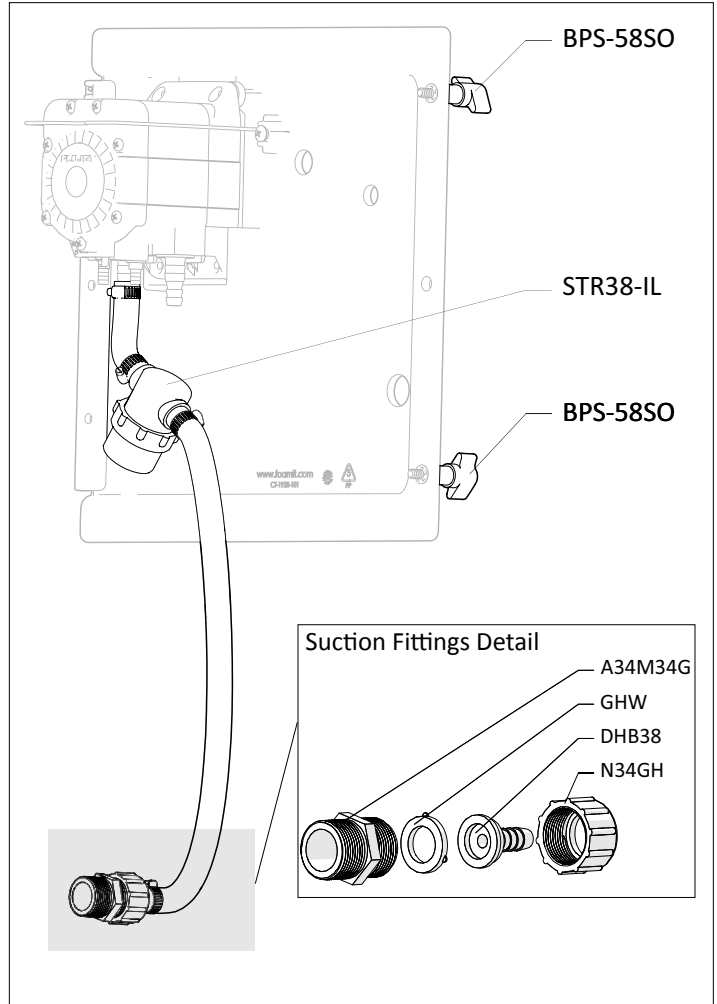
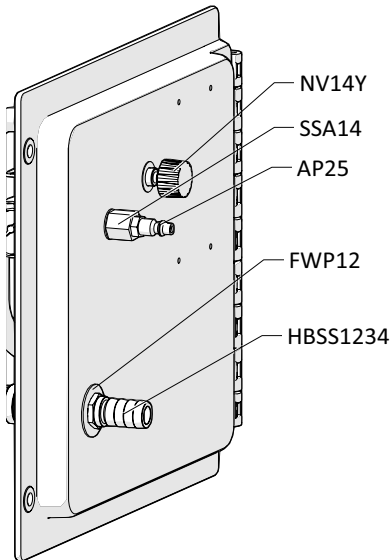
**ITEM NUMBER (Kalrez pump): PA-PFK**

**ITEM NUMBER (Viton pump): PA-PFV**

**Plate - Inside View**



**Plate - Back View**

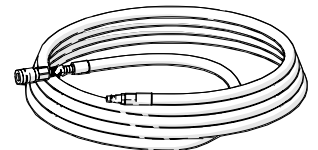


**OPTIONAL COMPONENTS**

**WATER SEPARATOR**  
ITEM NUMBER: WS-20CFM



**30 ft (9 m) AIR HOSE ASSEMBLY**  
ITEM NUMBER: AH30



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ITEM NUMBER	DESCRIPTION
A34M34G	3/4 GHT X 3/4 MPT ADAPTOR
AG100	1.5 INCH DRY MODEL 20 DUAL SCALE GAUGE
AKSS34	SS ANTI-KINK SPRING FOR 3/4 INCH HOSE WITH PIN
AKSS34-P	SS ANTI-KINK SPRING FOR 3/4 INCH HOSE
AKSS-HPC	ANTI-KINK STAINLESS STEEL HITCH PIN CLIP
AP25	PLUG 1/4 NPTM AIR FITTING - BRASS
B103234	10-32 X 3/4 PHIL TRUSS MACH SCR 18-8
B8X58	8-15 X 5/8 inch PHIL FLAT TY-B 316 S.S.
BPS-58SO	Back Panel Screw - 5/8 inch with Stand Off
BPS-SSR	1/4 INCH PUSHNUT BOLT RETAINER STAINLESS STEEL
COT	1/8 X 1 COTTER PIN 18-8 S/S
CST5SS	5in S.S. SWIVEL CASTER WITH 4 IN WHEEL
CST5SS-L	5in S.S. SWIVEL CASTER WITH 4 IN WHEEL AND LOCK
CV38	PVC CHECK VALVE 3/8 BARBS - SS SPRING
DFP7	7 INCH HINGED CAP ASSEMBLY - INCLUDES BLACK CAP, LID FLANGE AND HINGE PIN
DFP7-C	7 INCH FILL CAP POLYPRO BLACK
DFP7-F	7 INCH TANK LID FLANGE POLYPRO
DFP7-PIN	HINGE PIN FOR DFP7-C & DFP7-C
DFP7-C-BL	7 INCH FILL CAP POLYPRO BLUE PANTONE
DFP7-C-GN	7 INCH FILL CAP POLYPRO GREEN PANTONE
DFP7-C-RD	7 INCH FILL CAP POLYPRO RED PANTONE
DFP7-C-YL	7 INCH FILL CAP POLYPRO YELLOW PANTONE
DHB38	3/4 FLAT SEAT 3/8 HOSE BARB
EC14-2	OETIKER CLAMP 13.8
EC75	OETIKER CLAMP-12/04/07
F34SS-L	SS CRIMP FERRULE 1.90inches X 1.5 inches LONG
FWAX15	FLAT AXLE WASHER
FWP12	7/8 ID X 1.5 OD X 0.05 THK SSFW
FWP14	C-816 1/2in SS WASHER
GHW	GARDEN HOSE WASHER - D-#102
H14B-H	1/4 INCH BLUE HOSE- GOODYEAR HORIZON - Available per ft.
H34B-H	3/4 INCH BLUE GOODYEAR HORIZON HOSE - Available per ft.
H38B-H	3/8 INCH BLUE GOODYEAR HORIZON HOSE - Available per ft.
HBSS1234	STAINLESS HOSE BARB 1/2 X 3/4
HBSS1438	STAINLESS HOSE BARB 1/4 MPT X 3/8 BARB
HBSSSEL1438	STAINLESS HOSE BARB ELBOW 1/4 INCH NPT X 3/8 HOSE BARB
HBSSSEL1814	304 STAINLESS ELBOW 1/8 INCH NPT X 1/4 INCH HOSE BARB

HHSB1238	HEX HEAD S.S. REDUCER BUSHING 1/2in X 3/8
HV60	1/2in STAINLESS BALL VALVE - w/ WELDED NUT
N34GH	3/4 GARD HSE SWIVEL NUT
NV14Y	FLOW CONTROL VALVE - INCLUDES BLACK KNOB
P56	PUMP WITH SANTOPRENE SEALS - INCLUDES HOSE BARBS, AIR FITTING, AND EXHAUST BARB
P56K	PUMP WITH KALREZ SEALS - INCLUDES HOSE BARBS, AIR FITTING, AND EXHAUST BARB
P56V	PUMP WITH VITON SEALS - INCLUDES HOSE BARBS, AIR FITTING, AND EXHAUST BARB
20756103B	Polypro G57 Air Port x HB Straight, w/ Viton o-ring
HB14P	1/4in BRASS HB AIR FITTING /G57/P56
HB5638	HOSE BARB FOR P56 PUMP
HB5638K	HOSE BARB FOR P56K PUMP
HB5638V	HOSE BARB FOR P56V PUMP
P56-BRKT	PUMP BRACKET- STAINLESS STEEL
P56-BRKT-SCREW	HI LO SCREW FOR RETAINING P56-BRKT
PL50-A	FI-50 ADAPTOR PLATE
PLPF	PORTABLE FOAMER BACK PLATE W/ HINGE AND HOLES
PLPF-PIN	302 STAINLESS PORTABLE PLATE HINGE PIN
PVCV34FM	PVC VALVE 3/4in FPT X 3/4in MPT
R25	AIR REGULATOR - 1/4ft TWO PORT 1/8ft TWO PORT - INCLUDES FILTER AND BOWL
S142034	1/4-20 X 3/4 PHIL TRUSS M/S 18-8
S5161812	5/16-18 x 1/2 Phil Pan 18-8
SSA14	SS304 MALE/FEMALE ADAPTOR 1/4 NPT X 1/4 NPT
SSAXLE50	SSAXLE - 50 GAL 5/8 x 23.05
SSC38	WORM GEAR CLAMP, S/S (.25-.63)
SSP50	STAINLESS STEEL AXLE PLATE (50 GAL)
SSP50-CSTR	STAINLESS STEEL PLATE FOR CASTER SUPPORT
SSST	SCREEN DISC .687 DIA. 10 X 10 MESH @ .020 DIA. 300 SERIES S.S.
SST12HB38	STAINLESS TEE COMBO 1/2in FPT X 3/8 in BARB WITH SSST AND S.S. MESH
SSMESH	STAINLESS STEEL MESH- 1 ball
STR38-IL	IN LINE STRAINER 3/8 BARB 20 MESH 304 STAINLESS EDPM GSKT
TANK-50N	50 GALLON PORTABLE UNIT NATURAL IN COLOR
TW916	1/2 INT TOOTH L/W 410SS
W15	NONMARKING WHEEL FOR PORTABLE UNITS
W387	S.S. 304 SPRAY WAND 3/8in MPT X 7in LONG - THREAD ON ONE END