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# USER MANUAL

**MODEL NUMBER:  
FI-CN-15N  
FI-CN-15NK  
FI-CN-15NV  
AND RELATED UNITS**

**15 Gallon Air Operated Portable Foam  
Unit for Concentrate Products**

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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 Safety Data Sheet (SDS).
- If this unit is modified or serviced with parts not listed in this manual, dilution rates may vary, or 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 (6.9 bar).
- Do not exceed a fluid temperature of 100°F (37.8°C).
- Always flush the unit with fresh water thoroughly when switching from an alkaline to an acid or an acid to an alkaline.
- Only use clean and dry air. Air must be filtered and free of moisture or pump life will be diminished. If needed, install a water separator before the 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.

### Specifications:

Hose ..... 30 feet reinforced hose, 3/4 inch inside diameter  
(9 meters reinforced hose, 19 mm inside diameter)  
Foam Output..... 20 to 45 gallons/minute  
(75 to 170 liters/minute)  
Foaming Distance ..... 25 to 30 feet (7 to 9 meters)

### Dimensions:

Length ..... 28 in (711 mm) approximately  
Width ..... 19 in (483 mm) approximately  
Height ..... 35 in (889 mm) approximately  
Weight, including discharge hose and wand:  
(Empty) ..... 70 lbs (31.6 kg) approximately

### Requirements:

Compressed Air Pressure Requirements: Air regulator is factory set at 50 psi (3.4 bar). Operating range is 40 to 80 psi (2.8 to 5.5 bar) with 5 to 10 CFM (141.6 to 283.2 l/min).

Liquid Temperature ..... 40°F to 100°F (4.4°C to 37.8°C)

Chemical Requirements: Follow all instructions from chemical manufacturer and Safety Data Sheet (SDS).

### Air Operated Double Diaphragm Pump Models Offered:

P56: Polypropylene body with Santoprene diaphragm

P56V: Polypropylene body with Viton diaphragm

P56K: Polypropylene body with Kalrez diaphragm

### Acceptable Products:

Alkaline cleaners, Caustic cleaners, Sanitizers, and Acids

\* D-Limonene may only be used with Kalrez pump

\* Chlorine may only be used with Viton or Kalrez pump

**DO NOT USE: All hydrocarbons**

## READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

### Operation Instructions:

1. Verify that the drain plug is securely closed.
2. Fill the tank with water.
3. Open the unit back plate. Insert the proper metering tip and connect the chemical intake line to the injector inlet barb.  
**Note:** Use the included metering tip color chart to determine the appropriate metering tip based on the product and dilution rate you will be using.
4. Follow all instructions from chemical manufacturer. Fill the chemical container with chemical concentrate.  
**Note:** The unit can hold two chemical jugs (for example, the 2.5 gallon jug with suction fittings), one 5 gallon bucket, or another compatible container.
5. Connect the chemical intake line to the chemical container.
6. Verify that the valve at the base of the suction line is open, to allow fluid into the suction line.
7. With the discharge ball valve in the closed position, plug an air line into the air fitting.
8. Slowly open the discharge ball valve to begin foaming. The discharge ball valve should be completely open while foaming.
9. While the unit is running and discharging product, adjust the needle valve as needed to regulate the wetness or dryness of the foam following the steps below:
  - a. Close needle valve completely in clockwise direction.
  - b. Open needle valve in counter-clockwise direction 2 complete turns.
  - c. Continue to open needle valve in ¼ turn increments, allowing 30 seconds between adjustments, until desired consistency of foam is achieved.
10. Close the discharge ball valve to stop foaming.

### METERING TIP COLOR CHART

Metering tip color	Ounces of chemical per gallon of water*	Dilution ratio (water:chemical)*
Turquoise	0.40	320:1
Pink	0.80	160:1
Light blue	0.95	135:1
Brown	1.30	98:1
Red	1.40	92:1
White	1.85	69:1
Green	1.90	67:1
Blue	2.65	48:1
Yellow	2.95	43:1
Black	4.80	27:1
Purple	6.40	20:1
Gray	6.80	19:1
No tip	9.20	14:1

\*Injection rates will vary based on chemical viscosity, air pressure, and many other factors. We recommend testing unit output to verify injection rate prior to use.

### After Use Instructions:

1. Disconnect the chemical intake line from the chemical container and connect it to a container of clean water. Make sure that the unit tank still contains water.
2. Activate the unit and allow it to run thoroughly until all chemical has been flushed from the system.
3. Disconnect the air line from the air fitting.
4. Open the discharge ball valve to relieve any pressure remaining in the system.
5. Close the ball valve after all pressure has been relieved from the system. Store the unit with the discharge ball valve in the closed position.

## READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

### Maintenance Instructions:

To keep your foam unit operating properly, periodically perform the following maintenance procedures:

**Note:** Before performing any maintenance, ensure that the unit has been disconnected from the air and water supply and depressurized according to the “After Use Instructions.”

- 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 chemical metering tip, suction line and strainer for debris and 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, you may wish to install a water separator before the unit.

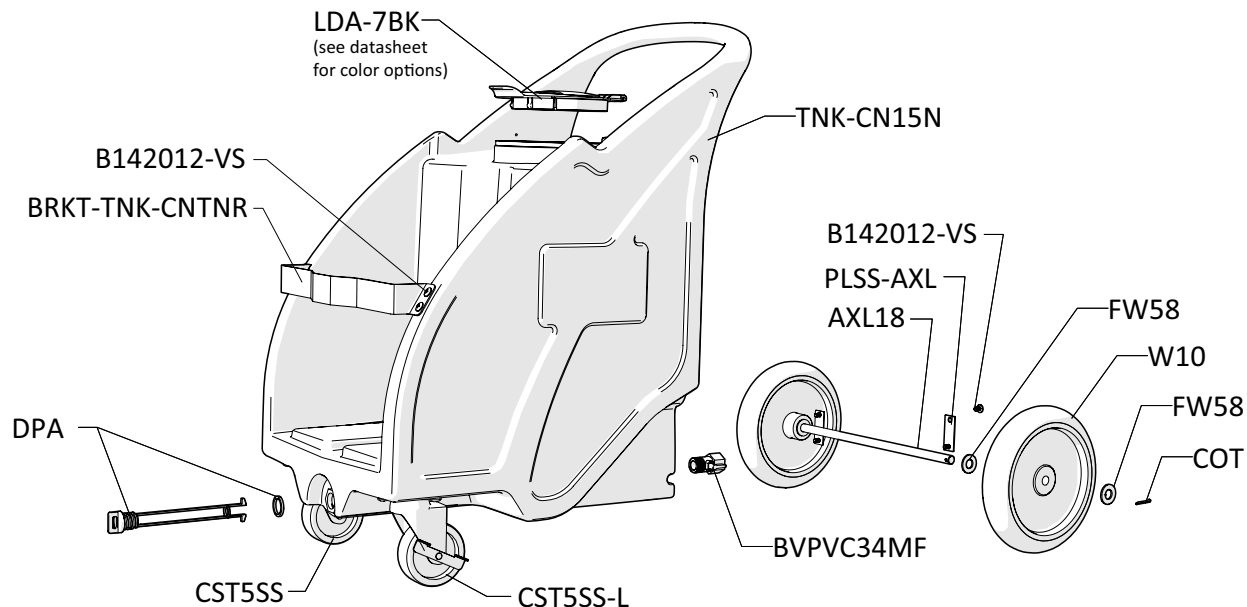
### Troubleshooting Instructions:

- Check to ensure that the discharge hose is uncoiled properly, and that there are no kinks that could obstruct fluid flow.
- Check the air regulator bowl and air filter for debris such as water, oil, or rust particles. Clean by unthreading the air regulator bowl from the air regulator.
- If the needle valve is open too far, the pump may cycle improperly due to lack of air pressure. If this occurs, close and readjust the needle valve as described in the “Operation Instructions.”
- Make sure proper foaming chemical and concentration are being used.
- If air passes through the pump without cycling, the pump needs to be replaced.
- If solution backs up into the air regulator bowl, the check valve needs to be replaced.
- If foam comes out wet, no matter where the needle valve is positioned, the check valve may need to be replaced.
- Check for proper air pressure on the air gauge. The air regulator is factory set at 50 psi (3.4 bar). Operating range is 40 to 80 psi (2.8 to 5.5 bar) with 5 to 10 CFM (141.6 to 283.2 l/min).

- If the unit operates at a reduced pressure:
  - o Check the air compressor supplying the unit. If the pressure is less than 40 psi (2.8 bar), turn the unit off until the compressor can catch up.
  - o 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.
  - o If both of the above are okay, the stainless steel mixing 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 in the open position.
    2. Remove the stainless hose barb from the tee fitting.
    3. Remove the screen and the mixing mesh from inside the tee fitting.
    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. If the mixing mesh has a lot of foreign particles in it, make sure the strainer is still in place.
- Check the chemical metering tip, 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.

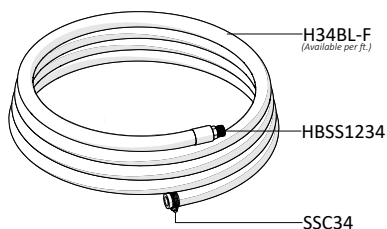
## READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

### TANK ASSEMBLY

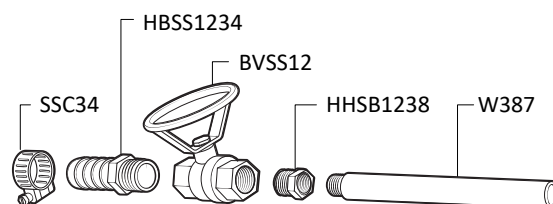


### HOSE AND WAND ASSEMBLY ITEM NUMBER: SSWA347-HA34BL-30

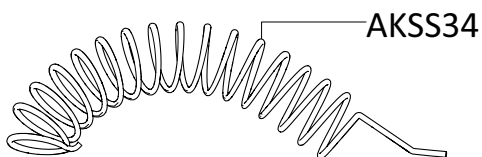
#### 30 ft (9 m) HOSE ASSEMBLY ITEM NUMBER: HA34BL-30



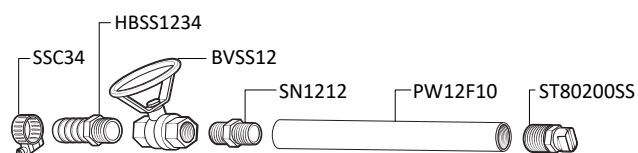
#### ZERO TIP FOAM WAND ASSEMBLY ITEM NUMBER: SSWA347



### ANTI-KINK SPRING

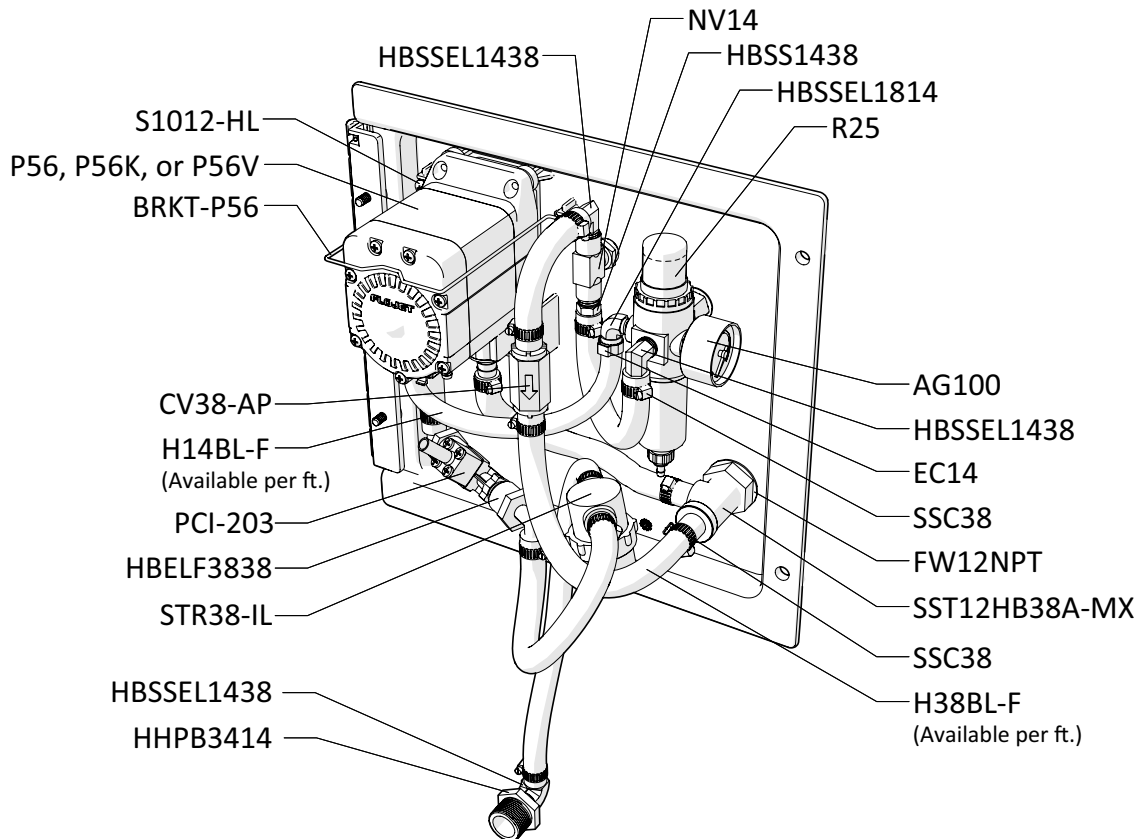


#### FAN TIP FOAM WAND ASSEMBLY ITEM NUMBER: PWA3410-ST

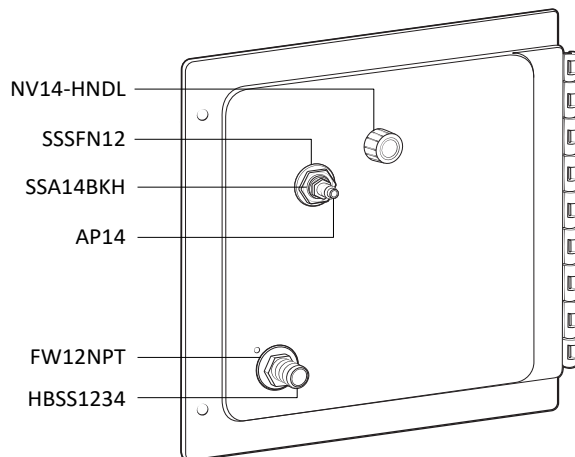


## READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

### BACK PLATE ASSEMBLY Inside View

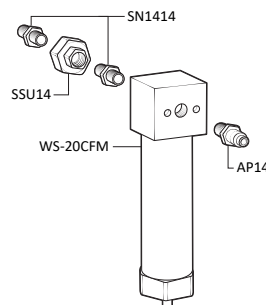


### BACK PLATE ASSEMBLY Outside View

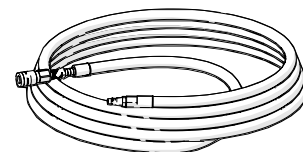


### OPTIONAL COMPONENTS

#### WATER SEPARATOR ASSEMBLY ITEM NUMBER: WSA-20CFM



#### 30 ft (9 m) AIR HOSE ASSEMBLY ITEM NUMBER: AHABL-30



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ITEM NUMBER	DESCRIPTION
AG100	AIR GAUGE - 1/8IN NPT - 0-100 PSI MARKINGS - DRY MODEL
AHABL-30	AIR HOSE ASSEMBLY - 30FT OF 3/8IN BLUE HOSE WITH FERRULED AIR QUICK CONNECT FITTINGS
AKSS34	SS ANTI-KINK SPRING FOR 3/4 INCH HOSE
AP14	AIR FITTING - 1/4IN MPT QUICK DISCONNECT HOSE COUPLING PLUG - NICKEL-PLATED BRASS
AXL18	AXLE-STAINLESS-0.625 DIA x 18.31 IN
B10321	BOLT - 10-32 X 1IN - STAINLESS STEEL - TRUSS HEAD PHILLIPS
B142012-VS	BOLT - 1/4-20 X 1/2IN - STAINLESS STEEL - TRUSS HEAD PHILLIPS - VIBRASEAL
B142058-VS	BOLT - 1/4-20 X 5/8IN - STAINLESS STEEL - TRUSS HEAD PHILLIPS - VIBRASEAL
BPTNA	BACK PLATE THUMB NUT ASSEMBLY - INCLUDES BOLT, THUMB NUT, AND TETHER
BST1420118-VS	BOLT - SET - 1/4-20 X 1 1/8IN - STAINLESS STEEL - VIBRASEAL
TN1420	¼-20 THUMB NUT - BRASS INSERT - ASSEMBLED WITH TETHER
BRKT-P56	PUMP BRACKET- STAINLESS STEEL
BRKT-TNK-CNTNR	BRACKET - STAINLESS STEEL - FOR SECURING CONTAINER TO TNK-CN15
BST14201125-VS	1/4-20 SET BOLT-1.125 IN LONG-VIBRA SEAL
BVPVC34MF	BALL VALVE - PVC - 3/4 NPT TO 3/4 FNPT - EPDM SEAL
BVSS12	STAINLESS BALL VALVE-1/2IN NPT
COT	COTTER PIN - STAINLESS - 1/8IN DIA X 1IN LONG
CST5SS	SWIVEL CASTER-STAINLESS-5IN CLEARANCE-4IN WHEEL
CST5SS-L	SWIVEL CASTER-STAINLESS-5IN CLEARANCE-4IN WHEEL-WITH LOCK
CV38-AP	CHECK VALVE-3/8IN BARBS-PVC BODY-HASTELLOY SPRING-TEFLON BALL-WHITE
DPA	DRAIN PLUG ASSEMBLY FOR NATURAL PORTABLE UNITS - INCLUDES GASKET
EC14	EAR CLAMP - OETIKER - STAINLESS STEEL - FOR 1/4IN HOSE
EC34	EAR CLAMP - OETIKER - STAINLESS STEEL - FOR 3/4IN HOSE
F34SS	FERRULE FOR 3/4IN HOSE - STAINLESS STEEL
FW58	FLAT WASHER FOR 5/8IN OD PIPE OR AXLE - STAINLESS - 0.64IN ID X 1.2IN OD X 0.05IN THK
FW12NPT	FLAT WASHER FOR 1/2IN NPT - STAINLESS - 0.88IN ID X 1.5IN OD X 0.05IN THK
FWNV14	FLAT WASHER FOR NV14 - STAINLESS - 0.52IN ID X 0.88IN OD X 0.03IN THK
H14BL-F	1/4IN ID BLUE HOSE - HYBRID TPE - AVAILABLE PER FT
H34BL-F	3/4IN ID BLUE HOSE - HYBRID TPE - AVAILABLE PER FT
H38BL-F	3/8IN ID BLUE HOSE - HYBRID TPE - AVAILABLE PER FT
HBELF3838	HOSE BARB ELBOW 3/8" BY FPT 3/8"
HBSS1234	HOSE BARB - STAINLESS STEEL - STRAIGHT - 1/2IN MPT X 3/4IN BARB
HBSS1438	HOSE BARB - STAINLESS STEEL - 1/4IN MPT X 3/8IN BARB
HBSS1438	HOSE BARB - STAINLESS STEEL - ELBOW - 1/4IN MPT X 3/8IN BARB
HBSS1814	HOSE BARB - STAINLESS STEEL - ELBOW - 1/8IN MPT X 1/4IN BARB
HHPB3414	HEX HEAD POLY BUSHING - 3/4IN MPT X 1/4IN FPT
HHSB1238	HEX HEAD STAINLESS BUSHING 1/2 MPT X 3/8 FPT

LDA-7BK	LID ASSEMBLY - INCLUDES 7 IN. BLACK LID, LID FLANGE, HINGE PIN, AND MOUNTING SCREWS
LD-7BK-FLNG	7IN LID FLANGE-POLYETHYLENE-BLACK
LD-7BK-LID	7IN LID-POLYETHYLENE-BLACK
LD-PIN	HINGE PIN FOR 7IN LID AND FLANGE
NV14	NEEDLE VALVE-1/4IN NPT-INCLUDES BLACK KNOB
NV14-HNDL	BLACK KNOB FOR NEEDLE VALVE
PCI-203	PLASTIC CHEMICAL INJECTOR KIT - 1 PRODUCT - 2X 3/8IN MPT - 1/4IN HOSE BARB - POLYPROPYLENE BODY - DEMA C SERIES P203CT - INCLUDES MTK832 METERING TIP KIT, TUBE, WEIGHT, STRAINER
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
HB5638	HOSE BARB FOR P56 PUMP
HB5638K	HOSE BARB FOR P56K PUMP
HB5638V	HOSE BARB FOR P56V PUMP
PLPF	PLATE - PORTABLE FOAM - INCLUDES HOLES AND PUMP MOUNT - HINGE SOLD SEPARATELY
PLPF-H	HINGE FOR PLPF
PLPF-PIN	STAINLESS HINGE PIN FOR PORTABLE PLATE
PLSS-AXL	AXLE PLATE - STAINLESS STEEL - 2.5IN X 1IN - 2 HOLES
PRCH-MXSS-MSH	MIXING MEDIA - STAINLESS - BALL - AS PURCHASED
PW12F10	1/2IN FNPT AND 1/2IN FNPT WAND - BLACK POLYPROPYLENE - 10IN LONG
R25	REGULATOR - AIR - 2X 1/4IN FPT AND 2X 1/8IN FPT PORTS WITH BOWL AND FILTER - NO GAUGE
ABR25	METAL AIR BOWL for R25
AFR25	AIR FILTER for R25
S1012-HL	SCREW - #10 X 1/2IN - STAINLESS STEEL - ROUND HEAD PHILLIPS - HILO THREAD
S812-FH	SCREW - #8 X 1/2IN - STAINLESS STEEL - FLAT HEAD PHILLIPS
SSA14BKH	BULKHEAD ADAPTER - STAINLESS STEEL - 1/4IN NPT X 1/4IN NPSM
SSC34	SCREW BAND CLAMP - STAINLESS STEEL - FOR 3/4IN HOSE
SSC38	SCREW BAND CLAMP - STAINLESS STEEL - FOR 3/8IN HOSE
SSSFN12	SERRATED STAINLESS STEEL FLANGE NUT - 1/2IN
SN1212	1/2in HEX STAINLESS STEEL NIPPLE
SN1414	STAINLESS HEX NIPPLE ¼ MPT X ¼ MPT
SSU14	STAINLESS STEEL UNION - ¼ IN. FPT
SST12HB38A-MX	STAINLESS TEE ASSEMBLY - ½ IN. FPT X ¾ IN. BARB - INCLUDES MIXING MATERIAL AND SCREEN
SST12HB38	STAINLESS STEEL TEE - 1/2IN FPT X 3/8IN BARB - NO MIXING MEDIA
MXA- PF	MIXING ASSEMBLY - PORTABLE FOAM - INCLUDES SS MIXING MEDIA AND SCREEN
ST80200SS	SPRAY TIP - 80 DEGREE - 20.0 GPM - STAINLESS - ½ MPT
STR38-IL	STRAINER - IN LINE - 2X 3/8IN HOSE BARB - EPDM GSKT - #20 MESH SS SCREEN - BLACK BOWL
TNK-CN15N	TANK - 15 GAL - CONCENTRATE - NATURAL
W10	WHEEL-NONMARKING-10IN
W387	3/8IN NPT PIPE WAND - POLISHED STAINLESS - 7IN LONG - THREADED ONE END ONLY