USER MANUAL

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 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 for thoroughly 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		**Fluid Fittings**		**Discharge Wand Tip**	
FI-WC	Santoprene (*standard*)	-	Stainless steel (*standard*)	-	Zero tip (*standard*)	
	Viton (**V**)		All-poly (**AP**)		Fan tip (**ST**)	
	Kalrez (**K**)					

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

Examples:
- FI-WC (standard unit with Santoprene pump seals, stainless steel fluid fittings, and zero tip)
- FI-WCV (unit with Viton pump seals, stainless steel fluid fittings, and zero tip)
- FI-WCK-AP-ST (unit with Kalrez pump seals, all-poly fluid fittings, and fan tip)

REQUIREMENTS	
Compressed air requirements	40-80 psi (2.8-5.5 bar) with 5-10 cfm (141.6-283.2 l/min)
Water requirements	10-100 psi (0.7-6.9 bar) Backflow prevention is required – consult local plumbing ordinances for more information.
Liquid temperature range	40-100˚F (4.4-37.8˚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 concentrated product
Dilution ratio range (water:chemical)*	14:1 to 320:1
Number of products unit can draw from (and whether it draws simultaneously or one at a time)	One product
Suction line length/diameter	8 ft. (2.4 m) clear hose with 1/4 in. (6.4 mm) inside diameter
Discharge hose diameter/length	50 ft. (15.2 m) hose, with 3/4 in. (19.1 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. (7.6-9.1 m)
Flow rate*	2 gal/min (7.6 l/min)
Pump seals	Santoprene, Viton, or Kalrez

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

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Installation Instructions:

1. Remove all components from packaging.

2. Select desired area to mount the control box.
   Note: We recommend mounting the control box at a height of 6 feet or less. The chemical suction line must reach the bottom of the chemical container. The bottom of the chemical container should not be positioned higher than the bottom of the control box.

3. Attach the control box mounting feet to the back of the control box, using the four screws provided in the parts package.

4. Mount the control box to the wall using four of the screws and plastic anchors provided in the parts package.
   Note: To drill holes for the plastic anchors, use a 5/16 inch drill bit.

5. Mount the hose hanger in a convenient location using the remaining two screws and anchors provided in the parts package.

6. Attach the discharge hose assembly to the discharge hose barb and secure it with the larger hose clamp provided in the parts package.

7. Connect the air inlet hose barb provided in the parts package to the air inlet valve located on the side of the control box. Then attach a 3/8 inch I.D. air line from your air compressor to the air inlet hose barb, and secure it with the smaller hose clamp provided in the parts package.

8. Connect a water line to the unit. The control box has a 1/2 inch FPT water inlet fitting. A garden hose adapter fitting assembly is included in the parts package.
   Note: A back-flow preventer must be installed in the water line – check local plumbing codes to ensure proper installation.

9. Open the cover of the control box. 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.

10. Place the other end of the chemical intake line into a chemical container.
    Note: The chemical suction line must reach the bottom of the chemical container. A strainer must be used on the chemical intake line.

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.

Operation Instructions:

1. Follow all instructions from chemical manufacturer.

2. With the discharge valve in the closed position, open the air inlet valve.

3. Slowly open the discharge ball valve to begin foaming. The discharge ball valve should be completely open while foaming.

4. While the unit is running and discharging product, adjust the needle valve, located inside the control box, 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 3 complete turns.

   c. Continue to open needle valve in 1/4 turn increments, allowing 30 seconds between adjustments, until desired consistency of foam is achieved.

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After Use Instructions:

We recommend flushing the discharge hose and depressurizing the unit after each use.

1. Place the chemical suction line into a container of water.
2. With the unit running, open the discharge valve, and allow the unit to be flushed with fresh water thoroughly until all chemical has been discharged from system.
3. Shut off the air supply to the unit by closing the air inlet valve.
4. Shut off the water supply to the unit.
5. Open the discharge valve to relieve any pressure remaining in the unit.
6. Close the discharge valve after all pressure has been relieved from the unit. Store the unit with the discharge valve in the closed position.

Maintenance Instructions:

To keep the 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.
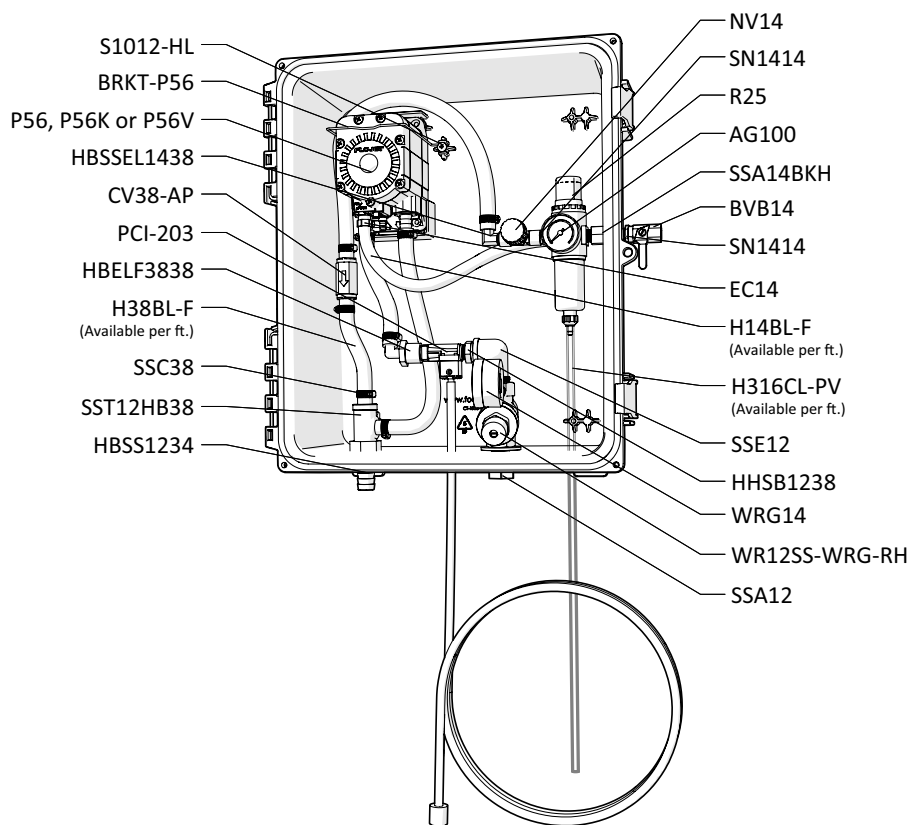
Troubleshooting Instructions:

- 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 air 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.
- 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.
- Check for proper water pressure on the water pressure gauge. To check the pressure:
  o With the unit running, open the discharge valve and allow the unit to run for about 1 minute.
  o Close the discharge valve.
  o Check the water pressure gauge. The pressure should read 30 psi (2.1 bar).
  o If necessary, adjust the water regulator using the flathead screw on the regulator body. The water pressure should be set at 30 psi (2.1 bar). Setting the pressure higher or lower may damage the unit or cause it to malfunction.
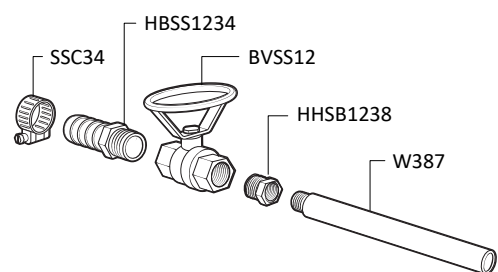
READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

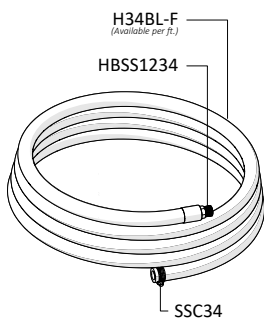## PARTS DIAGRAMS - UNITS WITH STANDARD FITTINGS

CONTROL BOX ASSEMBLY

S1012-HL
BRKT-P56
P56, P56K or P56V
HBSSEL1438
CV38-AP
PCI-203
HBELF3838
H38BL-F
(Available per ft.)
SSC38
SST12HB38
HBSS1234

NV14
SN1414
R25
AG100
SSA14BKH
BVB14
SN1414
EC14
H14BL-F
(Available per ft.)
H316CL-PV
(Available per ft.)
SSE12
HHSB1238
WRG14
WR12SS-WRG-RH
SSA12

HOSE AND ZERO TIP FOAM WAND ASSEMBLY
ITEM NUMBER: SSWA347-HA34BL-50

ZERO TIP FOAM WAND ASSEMBLY
ITEM NUMBER: SSWA347

SSC34
HBSS1234
BVSS12
HHSB1238
W387

50 ft (15 m) HOSE ASSEMBLY
ITEM NUMBER: HA34BL-50

H34BL-F
(Available per ft.)
HBSS1234
SSC34

FAN TIP FOAM WAND ASSEMBLY
ITEM NUMBER: PWA3410-ST

SSC34
HBSS1234
BVSS12
SN1212
PW12F10
ST80200SS
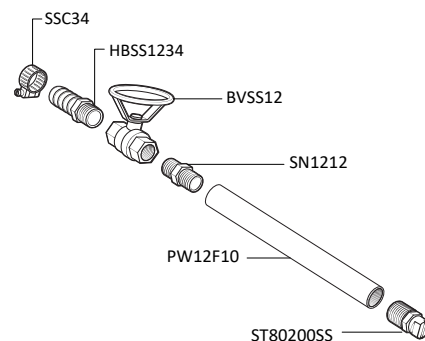
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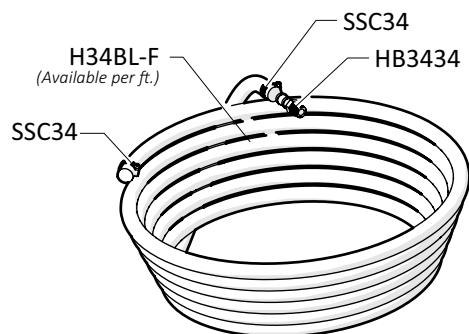
PARTS DIAGRAMS - UNITS WITH ALL-POLY FITTINGS

CONTROL BOX ASSEMBLY
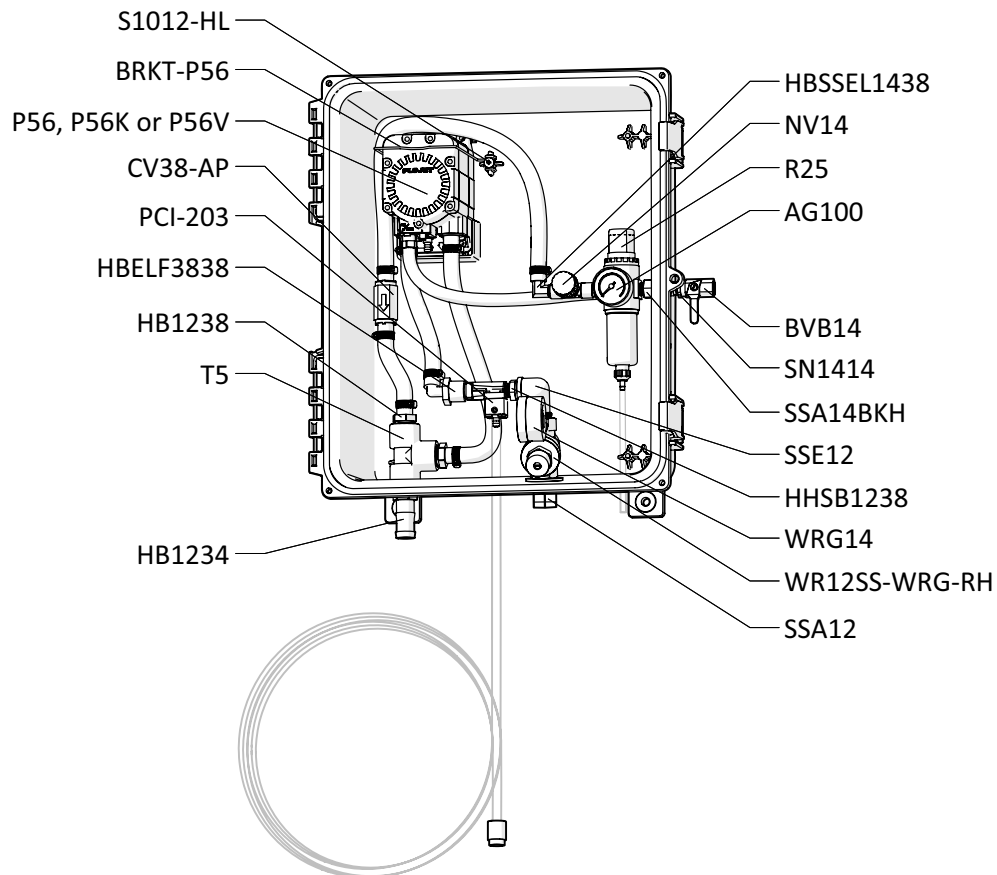
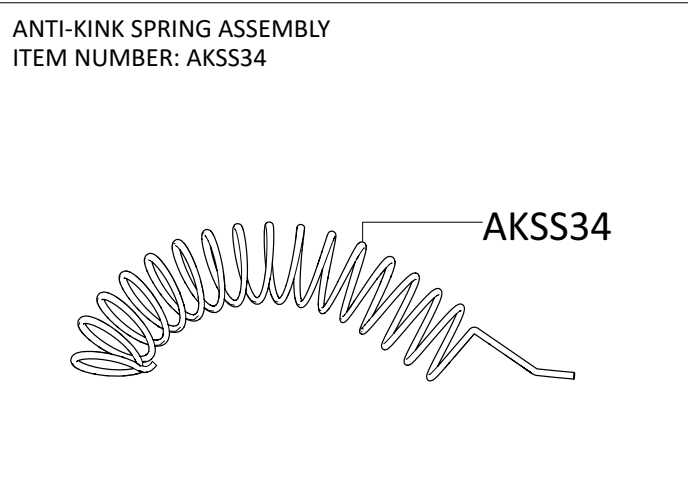### ZERO TIP ALL-POLY FOAM WAND ASSEMBLY
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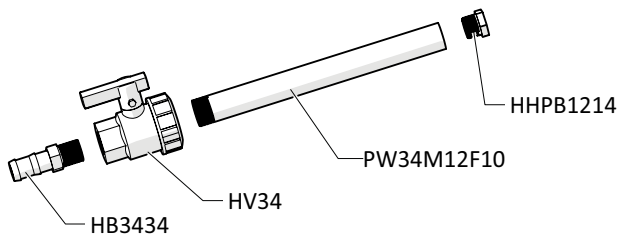
50 ft (15 m) ALL-POLY HOSE ASSEMBLY
ITEM NUMBER: HA34BL-50-AP
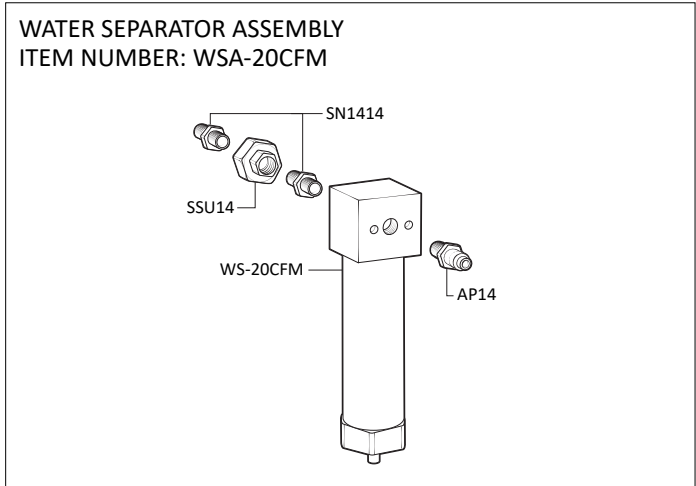
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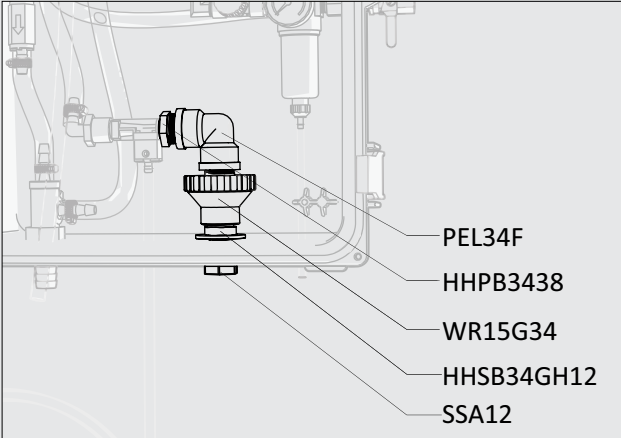
PARTS DIAGRAMS - SHARED COMPONENTS

ANTI-KINK SPRING ASSEMBLY
ITEM NUMBER: AKSS34

AKSS34

PARTS DIAGRAMS - OPTIONAL COMPONENTS

WATER SEPARATOR ASSEMBLY
ITEM NUMBER: WSA-20CFM

SN1414

SSU14

WS-20CFM

AP14

PARTS INFORMATION - LEGACY/DISCONTINUED COMPONENTS

LEGACY WATER REGULATOR ASSEMBLY

LEGACY PARTS DIAGRAM

PEL34F
HHPB3438
WR15G34
HHSB34GH12
SSA12

LEGACY PARTS LIST

ITEM NUMBER	DESCRIPTION
HHPB3438	HEX HEAD POLY REDUCER BUSHING 3/4in X 3/8in
HHSB34GH12	STAINLESS HEX HEAD BUSHING 3/4in MGH BY 1/2 FPT
PEL34F	3/4in FEMALE POLY PIPE ELBOW 90
WR15G34	WATER PRESSURE REGULATOR - 3/4in FGH BY 3/4in MPT Body ABS, internal parts, SS, PP and Santo

Conversion kit to upgrade to current water inlet: CK-WR12SS.

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ITEM NUMBER	DESCRIPTION
AG100	AIR GAUGE - 1/8IN NPT - 0-100 PSI MARKINGS - DRY MODEL
AKSS34	SS ANTI-KINK SPRING FOR 3/4 INCH HOSE
BRKT-P56	PUMP BRACKET- STAINLESS STEEL
BVB14	BALL VALVE - BRASS - NICKEL PLATED - AIR INLET VALVE - 1/4IN FPT X 1/4IN FPT
BVSS12	STAINLESS BALL VALVE-1/2IN NPT
CV38-AP	CHECK VALVE-3/8IN BARBS-PVC BODY-HASTELLOY SPRING-TEFLON BALL-WHITE
EC14	EAR CLAMP - OETIKER - STAINLESS STEEL - FOR 1/4IN HOSE
F34SS	FERRULE FOR 3/4IN HOSE - STAINLESS STEEL
FW12NPT	FLAT WASHER FOR 1/2IN NPT-STAINLESS-.875 ID X 1.5 OD X 0.05 THK
FW12NPT-THK	FLAT WASHER-7/8 F/W-.937 ID X 1.75 OD X .134 THK-18-8 SS
H14BL-F	1/4IN ID BLUE HOSE-HYBRID TPE-AVAILABLE PER FT
H316CL-PV	3/16IN ID 5/16IN OD CLEAR HOSE - PVC - 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
HB1234	1/2in MPT X 3/4in HOSE BARB
HB1238	1/2in MPT X 3/8in HOSE BARB
HB3434	HOSE BARB - POLYPROPYLENE - STRAIGHT - 3/4IN MPT X 3/4IN BARB
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
HBSSEL1438	HOSE BARB - STAINLESS STEEL - ELBOW - 1/4IN MPT X 3/8IN BARB
HBSSEL1814	HOSE BARB - STAINLESS STEEL - ELBOW - 1/8IN MPT X 1/4IN BARB
HHPB1214	HEX HEAD POLY BUSHING - 1/2IN MPT X 1/4IN FPT
HHSB1238	HEX HEAD STAINLESS BUSHING 1/2 MPT X 3/8 FPT
HV34	3/4in POLY BALL VALVE - EPDM SEAL
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
HBB14P	1/4IN HOSE BARB-BRASS-FOR G57/P56 AIR FITTING WITH O-RING
HB5638	HOSE BARB FOR P56 PUMP
HB5638K	HOSE BARB FOR P56K PUMP
HB5638V	HOSE BARB FOR P56V PUMP
PBA-16138	POLY BOX ASSEMBLY - 16IN X 13IN X 8IN - GRAY POLYPROPYLENE - INCLUDES BRAND LABEL AND MOUNTING HARDWARE
PB16138-LID	POLY BOX LID - GRAY POLYPROPYLENE - FOR PBA-16138 - INCLUDES PB-GSKT ROPE SEAL
PB16138-BOX	POLY BOX - GRAY POLYPROPYLENE - FOR PBA-16138
PB-FT	POLY BOX FOOT - GRAY POLYPROPYLENE - FOR PBA-12117 AND PBA-16138
PB-LTCH	POLY BOX LATCH - GRAY POLYPROPYLENE - TWO PIECES ASSEMBLED - FOR PBA-12117 AND PBA-16138
PB-PIN	STAINLESS STEEL HINGE PIN FOR PB16138 AND PB12117
PW12F10	1/2IN FNPT AND 1/2IN FNPT WAND - BLACK POLYPROPYLENE - 10IN LONG
PW34M12F10	3/4IN NPT 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
AFR25	AIR FILTER for R25
ABR25	METAL AIR BOWL for R25
S1012-HL	SCREW - #10 X 1/2IN - STAINLESS STEEL - ROUND HEAD PHILLIPS - HILO THREAD
S1034-FH-HL	SCREW - #10 X 3/4IN - STAINLESS STEEL - FLAT HEAD PHILLIPS - HILO THREAD
SN1212	STAINLESS HEX NIPPLE 1/2 MPT X 1/2 MPT
SN1414	STAINLESS HEX NIPPLE 1/4 MPT X 1/4 MPT
SSA12	STAINLESS ADAPTOR 1/2 MPT X 1/2 FPT
SSA14BKH	BULKHEAD ADAPTER - STAINLESS STEEL - 1/4 IN. NPT X 1/4 IN. NPSM
SSC34	SCREW BAND CLAMP - STAINLESS STEEL - FOR 3/4IN HOSE
SSC38	SCREW BAND CLAMP - STAINLESS STEEL - FOR 3/8IN HOSE
SSE12	STAINLESS STREET ELBOW - 304 STAINLESS STEEL - 1/2IN FPT X 1/2IN MPT
SSSFN12	SERRATED STAINLESS STEEL FLANGE NUT - 1/2 IN.
SST12HB38	STAINLESS STEEL TEE - 1/2IN FPT X 3/8IN BARB - NO MIXING MEDIA
ST80200SS	SPRAY TIP-80 DEGREE-20.0 GPM-STAINLESS-1/2 MPT
SSWVLA12	STAINLESS GARDEN HOSE SWIVEL ADAPTER X 1/2 MPT
SSWVLN34GH	STAINLESS GARDEN HOSE SWIVEL NUT 3/4IN GHT
STR34	1in SEAL/STRAINER FOR 3/4 GH FITTINGS
T5	1/2 POLY TEE
W387	3/8IN NPT PIPE WAND - POLISHED STAINLESS - 7IN LONG - THREADED ONE END ONLY
WR12SS-WRG-RH	WATER PRESSURE REGULATOR - STAINLESS STEEL - FKM SEALS - 1/2IN FPT - ASSEMBLED WITH GAUGE FACING LEFT - FOR USE ON RIGHT SIDE OF BOX
WRG14	WATER PRESSURE REGULATOR GAUGE FOR WR12SS
WMA-HH	WALL MOUNT BRACKET ASSEMBLY - HOSE HANGER - INCLUDES MOUNTING HARDWARE
WMS14	WALL MOUNT SCREW - #14 X 1 1/4IN - STAINLESS STEEL - HEX HEAD SLOTTED
WMS14A	WALL MOUNT SCREW ANCHOR -#14 X 1 1/4IN - PLASTIC - 5/16IN DRILL SIZE
WS-20CFM	TSUNAMI WATER SEPARATOR/AIR DRYER - 20 CFM - 1/4IN FPT PORTS