USER MANUAL

MODEL NUMBER:

FI-WC-11AP
FI-WC-11AP2
AND RELATED UNITS

Wall Mounted High Concentration Foam Unit with All-Poly Fittings

English (Original Instructions)

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, 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 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 an air dryer before unit.
- Do not use an air lubricator before the unit.
- Never use unit with hydrocarbons or flammable products.

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.

OPTIONS: *(unit with 1-product pick up)*	
	Pump Seal Material
FI-WC-11AP	Santoprene (standard)
	Viton **(V)**
	Kalrez **(K)**

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

Examples:

- FI-WC-11AP (standard unit with Santoprene pump seals)
- FI-WC-11APV (unit with Viton pump seals)

OPTIONS: *(unit with 2-products pick up)*		
	Pump Seal Material	
FI-WC-11AP	Santoprene (standard)	**2**
	Viton **(V)**	
	Kalrez **(K)**	

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

Examples:

- FI-WC-11AP2 (standard unit with Santoprene pump seals)
- FI-WC-11APK2 (unit with Kalrez pump seals)

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

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		
	FI-WC-11AP	**FI-WC-11AP2**
Power type	Compressed air	
Chemical pickup type	Draws from concentrated product	
Dilution ratio range (water:chemical)*	1:1 to 16:1	
Number of products unit can draw from	One product	Two products, one at a time
Suction line length/diameter	8 ft. (2.4 m) clearbraid hose with 1/2 in. (12.7 mm) inside diameter (for each product)	
Discharge hose diameter/length	50 ft. (15.2 m) hose, with 3/4 in. (19 mm) inside diameter	
Discharge wand/tip type	32 in. (81.3 cm) polypropylene wand with zero tip and polypropylene ball valve	
Output distance	15-20 ft. (4.6-6.1 m)	
Output volume	20 gal/min (75.7 l/min) of foam	
Flow rate*	1.6 gal/min (6.1 l/min)	
Pump seals	Santoprene, Viton, or Kalrez	
Fluid fittings type	All-poly	

*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 lines 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 water inlet fitting.
   Note: A back-flow preventer must be installed in the water line – check local plumbing codes to ensure proper installation.
9. Insert the proper metering tips and connect the chemical intake lines to the inlet barbs. Note: Use the included metering tip color charts to determine the appropriate metering tip based on the product and dilution rate you will be using.
10. Place the other end of each chemical intake line into a chemical container.

METERING TIP COLOR CHART

Metering Tip Color	Diameter (Inches)	Ratios (Water:Chemical)**
NO TIP	NO TIP	1:1
GREY	0.128	1.5:1
BLACK	0.098	2.25:1
BEIGE	0.07	3.25:1
RED	0.052	4.25:1
WHITE	0.043	6.5:1
BLUE	0.04	7.5:1
TAN	0.035	9:1
GREEN	0.028	11:1
ORANGE	0.025	16:1
*BROWN**	*0.023*	*22:1*
*YELLOW**	*0.02*	*27:1*
*PURPLE**	*0.014*	*43:1*
*PINK**	*0.01*	*53:1*

*** Use of these metering tips is not recommended. At ratios greater than 16:1 (water:chemical), the output volume of the unit may be greatly reduced.**

** 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.

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

Operation Instructions:

1. Slowly open the discharge valve to begin foaming. The discharge valve should be completely open while foaming.
2. Adjust the needle valve, located inside the control box, 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 ¼ turn increments, allowing 30 seconds between adjustments, until desired consistency of foam is achieved.

After Use Instructions:

1. Place the chemical suction line into a container of water.
2. Open the discharge valve, and allow the unit to be thoroughly flushed with water until all chemical has been discharged from system.
3. Close 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 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/water supply and depressurized according to the "After Use Instructions" above.

- 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 tips, intake lines and strainers for debris and clean as needed.
- Drain the 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 the air source has a high moisture content, you may wish to install a water separator before the unit.

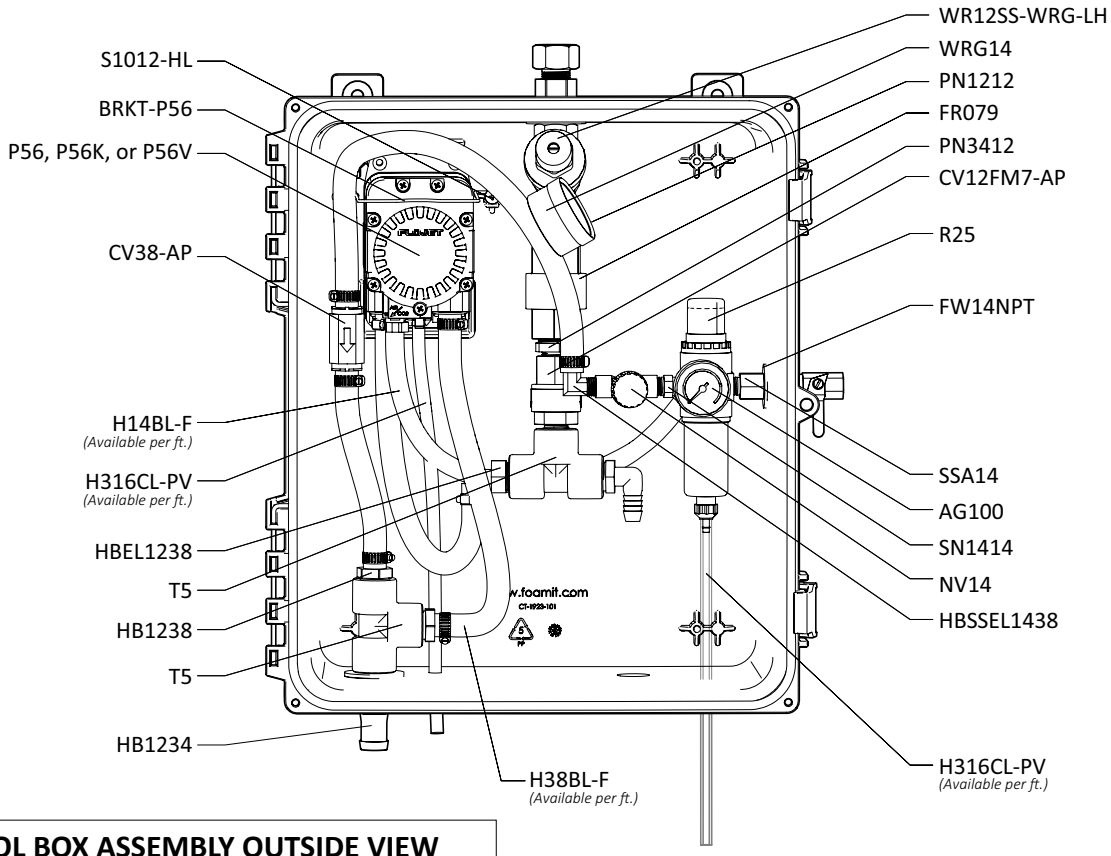
Troubleshooting Instructions:

- 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 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.
- 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 283.3 l/min).
- If the unit operates at a reduced pressure:
  - 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.
  - 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 tips, intake lines and strainers for debris or damage. Clean or replace as needed. To prevent damage to the unit, strainers must always be used.
- Make sure proper foaming chemical and concentration are being used.
- 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 Operation Instructions.
- If foam comes out wet, no matter where the needle valve is positioned, the check valve may need to be replaced.
- Check for proper water pressure on the water pressure gauge. To check the pressure:
  - With the unit running, open the discharge valve and allow the unit to run for about 1 minute.
  - Close the discharge valve.
  - Check the water pressure gauge. The pressure should read 30 psi (2.1 bar).
  - 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.

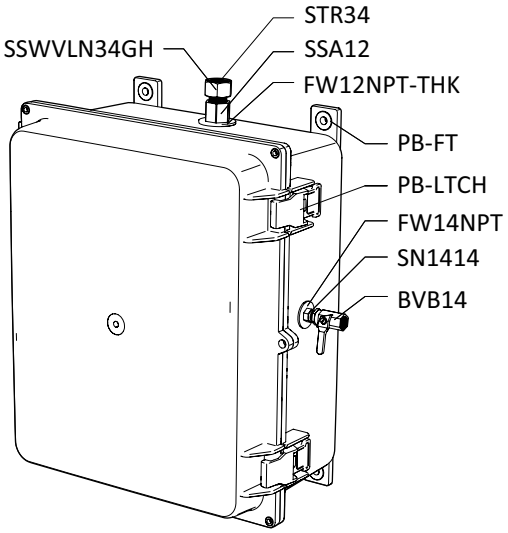
READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

PARTS DIAGRAMS - UNITS WITH STANDARD FITTINGS

CONTROL BOX ASSEMBLY FRONT INSIDE VIEW



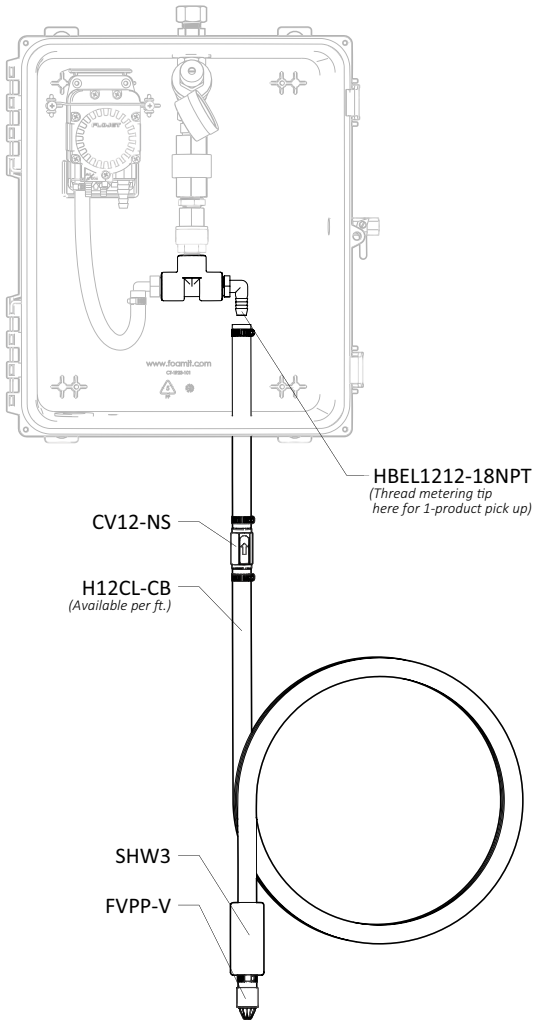
CONTROL BOX ASSEMBLY OUTSIDE VIEW



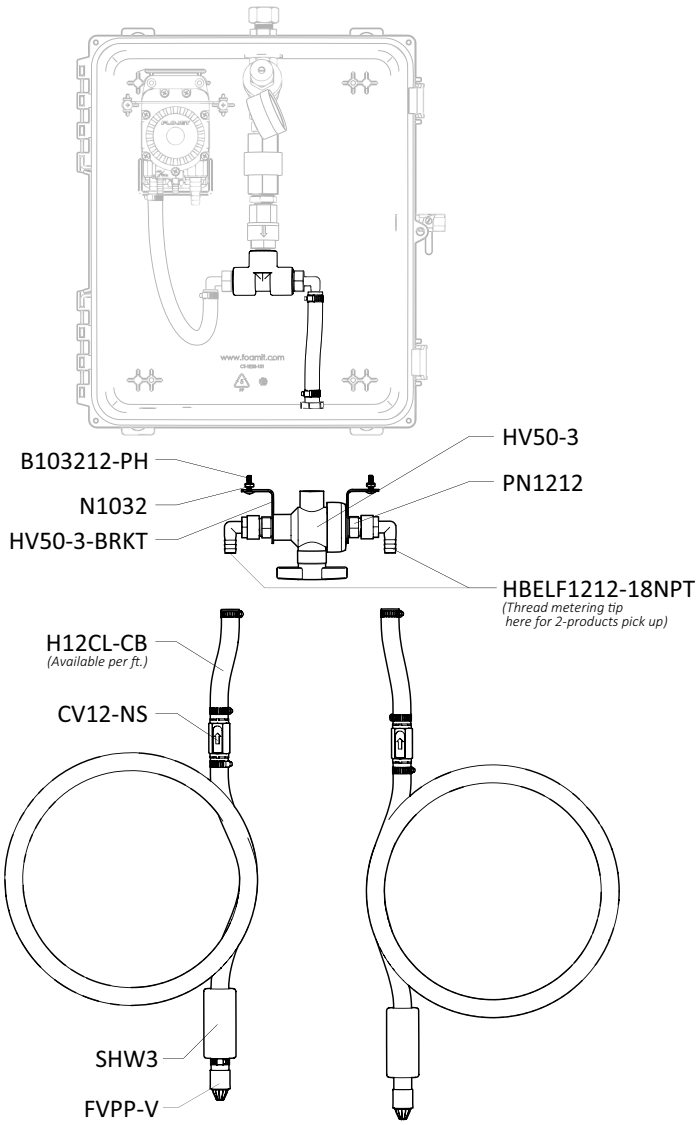
READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

PARTS DIAGRAMS

1-PRODUCT PICK UP LINE



2-PRODUCT PICK UP LINE



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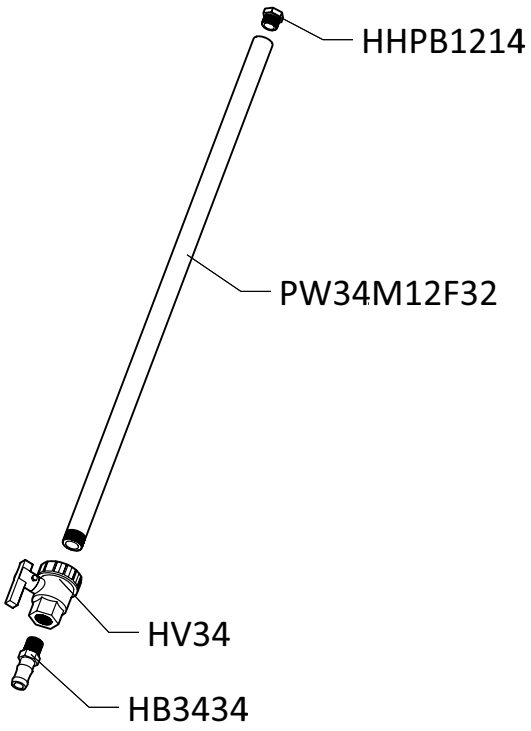
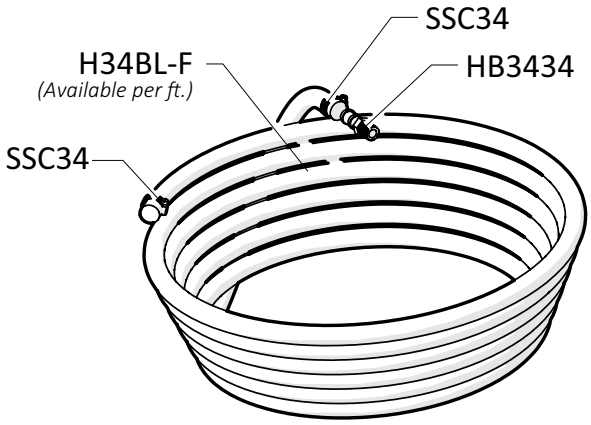
PARTS DIAGRAMS

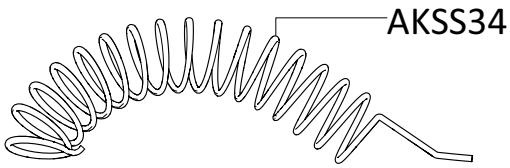
ZERO TIP FOAM WAND ASSEMBLY
ITEM NUMBER: PWA3432-AP



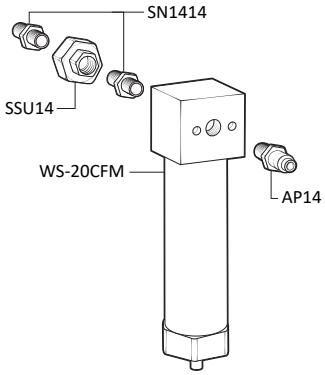
50 ft (15 m) HOSE ASSEMBLY
ITEM NUMBER: HA34BL-50-AP



ANTI-KINK SPRING ASSEMBLY
ITEM NUMBER: AKSS34

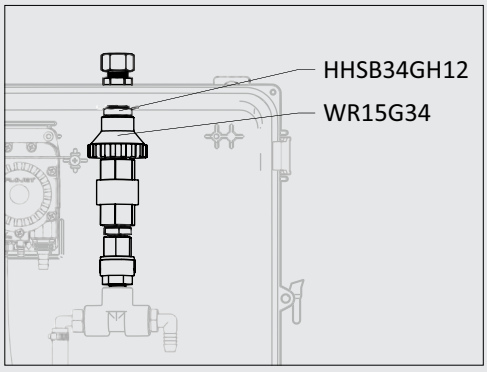


WATER SEPARATOR ASSEMBLY*
ITEM NUMBER: WSA-20CFM
*OPTIONAL COMPONENT



LEGACY WATER REGULATOR ASSEMBLY

LEGACY PARTS DIAGRAM



LEGACY PARTS LIST

ITEM NUMBER	DESCRIPTION
HHSB34GH12	STAINLESS HEX HEAD BUSHING 3/4in MGH BY 1/2 FPT
WR15G34	WATER PRESSURE REGULATOR - 3/4in FGH BY 3/4in MPT Body ABS, internal parts, SS, PP and Santo

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

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
B103212-PH	BOLT - 10-32 X 1/2IN - STAINLESS STEEL - PAN HEAD PHILLIPS
BVB14	BALL VALVE - BRASS - NICKEL PLATED - AIR INLET VALVE - 1/4IN FPT X 1/4IN FPT
CV12FM7-AP	WHITE 1/2 FPT X 1/2 MPT- 7 LB-HASTELLOY SPRING-EP SEALS
CV12-NS	1/2 IN X 1/2 IN HB-PVC CHECK VALVE-NO SPRING-TEFLON BALL-VITON SEALS
CV38-AP	CHECK VALVE-3/8IN BARBS-PVC BODY-HASTELLOY SPRING-TEFLON BALL-WHITE
EC14	EAR CLAMP - OETIKER - STAINLESS STEEL - FOR 1/4IN HOSE
FR079	687 SERIES FLOW RESTRICTOR - 0.79 GPM - 3/4 FPT
FVPP-V	FOOT VALVE - POLYPROPYLENE BODY - VITON CHECK VALVE - BLACK
FW14NPT	FLAT WASHER FOR ¼ IN. NPT - STAINLESS - 0.57 IN. ID X 1.28 IN. OD X 0.08 IN. THK
FW12NPT	FLAT WASHER FOR 1/2IN NPT - STAINLESS - 0.88IN ID X 1.5IN OD X 0.05IN THK
FW12NPT-THK	FLAT WASHER FOR 1/2 IN NPT - THICK - STAINLESS - 0.88IN ID X 1.5IN OD X 0.12IN THK
H12CL-CB	1/2IN ID CLEARBRAID HOSE - PVC - AVAILABLE PER FT
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	HOSE BARB - POLYPROPYLENE - 1/2IN MPT X 3/8IN BARB
HB3434	HOSE BARB - POLYPROPYLENE - STRAIGHT - 3/4IN MPT X 3/4IN BARB
HBEL1212-18NPT	HOSE BARB - POLY - ELBOW - 1/2IN MPT X 1/2IN BARB - TAPPED 1/8IN NPT FOR METERING TIP
HBEL1212	HOSE BARB ELBOW 1/2in MPT X 1/2in BARB
HBEL1238	HOSE BARB ELBOW 1/2 X 3/8
HBELF1212-18NPT	HOSE BARB - POLY - ELBOW - 1/2IN FPT X 1/2IN BARB - TAPPED 1/8IN NPT FOR METERING TIP
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 1/2 MPT X 1/4 FPT
HHSB34GH12	STAINLESS HEX HEAD BUSHING 3/4IN MGH BY 1/2 FPT
HV34	3/4in POLY BALL VALVE - EPDM SEALS
HV50-3	3-WAY BALL VALVE - DIVERTING - 1/2 INCH - PP BODY - TEFLON SEATS - VITON O-RING
HV50-3-BRKT	SS BRACKET FOR HV50-3
MTK18	METERING TIP KIT - 1/8IN NPT - HYDRO SYSTEMS - INCLUDES ALL COLORS
N1032	NUT - 10-32 - STAINLESS STEEL
NV14	NEEDLE VALVE-1/4IN NPT-INCLUDES BLACK KNOB
NV14-HNDL	BLACK KNOB FOR NEEDLE VALVE
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 AND BRAND LABEL
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
PN1212	1/2IN MPT X 1/2IN MPT POLY NIPPLE
PN3412	3/4IN MPT X 1/2IN MPT POLY NIPPLE
PW34M12F32	POLYPROPYLENE WAND - 3/4IN NPT AND 1/2IN FNPT - BLACK - 32IN 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
SHW3	SUCTION HOSE WEIGHT - 15/16IN ID X 1 1/2IN OD X 3 1/4IN LONG - PVC COATED STAINLESS
SN1414	STAINLESS HEX NIPPLE 1/4 MPT X 1/4 MPT
SSA12	STAINLESS ADAPTOR 1/2 MPT X 1/2 FPT
SSA14	STAINLESS ADAPTOR 1/4 MPT X 1/4 FPT
SSC12	SCREW BAND CLAMP - STAINLESS STEEL - FOR 1/2IN HOSE
SSC34	SCREW BAND CLAMP - STAINLESS STEEL - FOR 3/4IN HOSE
SSC38	SCREW BAND CLAMP - STAINLESS STEEL - FOR 3/8IN HOSE
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
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
WR12SS-WRG-LH	WATER PRESSURE REGULATOR - STAINLESS STEEL - FKM SEALS - 1/2IN FPT - ASSEMBLED WITH GAUGE FACING RIGHT - FOR USE ON LEFT SIDE OF BOX
WRG14	WATER PRESSURE REGULATOR GAUGE FOR WR12SS
WSA-20CFM	WATER SEPARATOR ASSEMBLY-20CFM-1/4IN FPT PORTS-INCLUDES AIR PLUG, UNION FITTINGS