# 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 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 hose at yourself, another person, or any object you do not want covered in chemical.

- 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.

- 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.

- Never use unit if it is damaged or leaking.

**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** | **Operating Type** |
| CT | Santoprene **(WL)** | Manual air button **(AB)** |
| | Viton **(WLV)** | Timer and solenoid valve **(TMR)** |
| | Kalrez **(WLK)** | |

Add bold option codes to item number as shown.

Examples:

- CT-WL-AB (Single product transfer unit with Santoprene pump seals and manual air button)
- CT-WLV-TMR (Single product transfer unit with Viton pump seals and timer and solenoid valve)
- CT-WLK-AB (Single product transfer unit with Kalrez pump seals and manual air button)

| REQUIREMENTS | | |
|---|---|---|
| | **WITH TIMER AND SOLENOID VALVE:** | **WITH MANUAL AIR BUTTON:** |
| Compressed air requirements | Air regulator factory set at 50 psi (3.4 bar). Operating range is 40 to 80 psi (2.8 to 5.5 bar) with 2 CFM (56.6 l/min) | |
| Liquid temperature range | 40-100˚F (4.4-37.8˚C) | |
| Electrical requirements | 120 VAC at 60 Hz, 2 amps (GFCI protected outlet) | None |
| Operating voltage | 120 VAC | None |
| Chemical compatibility | Chemical products used with this equipment must be formulated for this type of application and compatible with unit materials. For more information on chemical compatibility, consult the manufacturer or SDS for your product or contact our customer service department. | |

| SPECIFICATIONS | | |
|---|---|---|
| | **WITH TIMER AND SOLENOID VALVE:** | **WITH MANUAL AIR BUTTON:** |
| Power type | Compressed air, electricity | Compressed air |
| Number of products unit can draw from | One product | |
| Suction line length/diameter | 8 ft. (2.4 m) hose with 1/2 in. (12.7 mm) inside diameter | |
| Discharge hose diameter/length | 8 ft. (2.4 m) hose with 1/2 in. (12.7 mm) inside diameter | |
| Discharge wand/tip type | None | |
| Flow rate* | 3.5 gal/min (13.2 l/min) | |
| Pump seals | Santoprene, Viton, or Kalrez | |
| Timer operation type | Single shot | None |

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

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## Installation Instructions:

### For all CT units

1. Remove all components from packaging.

2. Select desired area to mount the control box. **Note:** The control box should be mounted to a vertical wall.

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. Drop the suction line into the chemical container.

6. Connect 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 ⅜ inch I.D. air line from your air compressor to the air inlet hose barb, and secure it with the samller hose clamp provided in the parts package.

### For CT units with a timer and solenoid valve

1. Set single-shot timer to desired run time, as described in the timer adjustment instructions. Make sure run time will not exceed tank capacity.



## TIMER ADJUSTMENT INSTRUCTIONS

The timer is a single-shot timer with selectable run time ranging from 1 to 1023 seconds.

**To set the timer:**

1. The 10 dip switches control the total active time. To the left is inactive and to the right is active. Combine the numbers next to the active dip switches to achieve the desired time in seconds.

2. With the power switch in the OFF position, plug the unit into a GFCI protected 120 VAC power outlet. Turn on power to unit.

3. Turn on air to unit.

## Operation Instructions:

1. Following all instructions from chemical manufacturer, place the chemical suction line into a container of pre-mixed chemical solution.

2. Drop the discharge line into the empty container.

3. Activate unit - either manually or with timer.

4. For manual units, release the air button when full.

5. Remove discharge line from tank.

## Maintenance Instructions:

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

- 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 ocated within the air regulator as needed. Clean by unthreading the air regulator bowl from the air regulator.

- Check the chemical 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 (sold separately) before the unit.
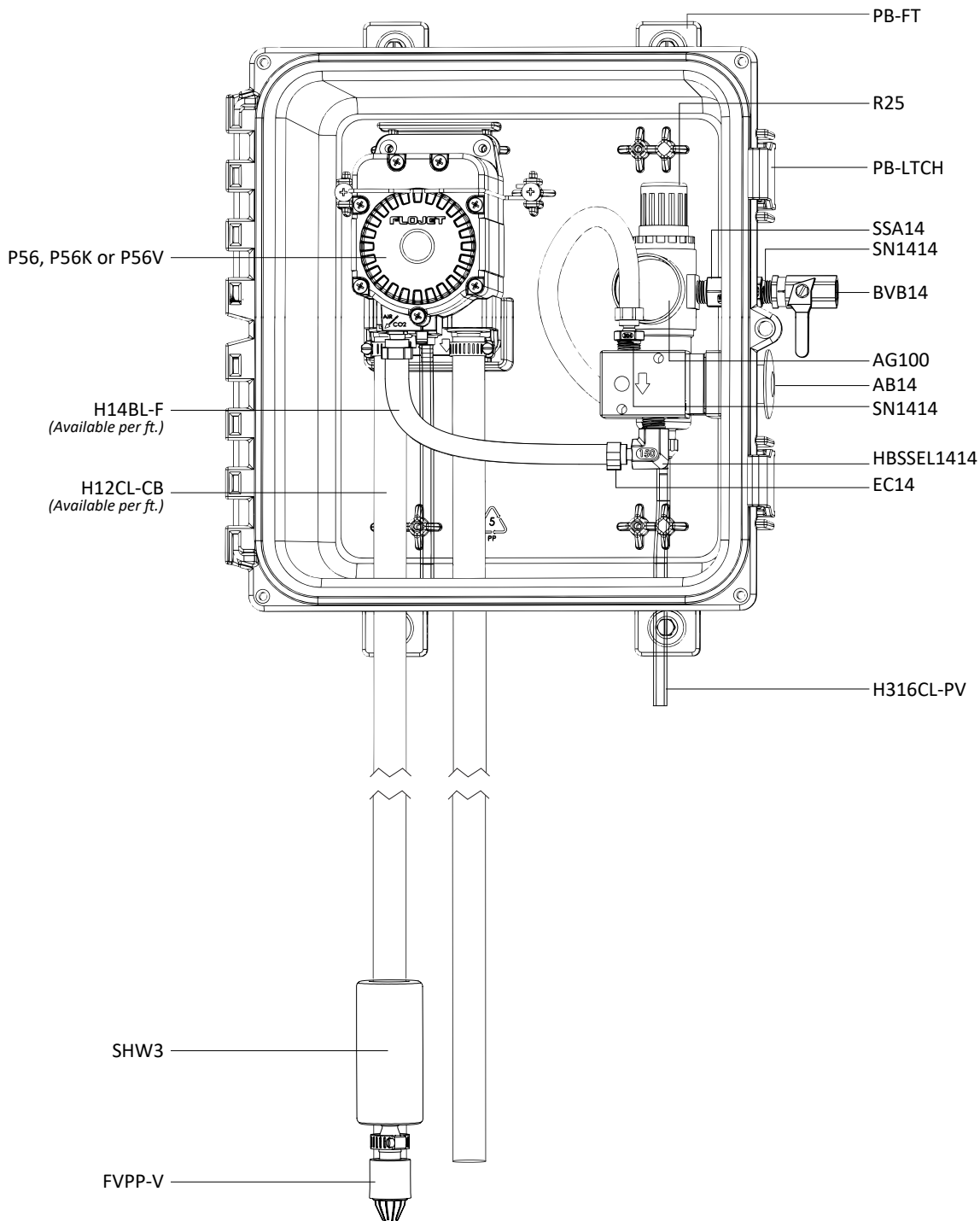
# READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

**Troubleshooting Instructions:**

- If air passes through the pump without cycling, the pump needs to be replaced.

- Make sure the manual air button is intact and functioning.

- Verify the timer is properly set.

- If you push the button and it does not turn on, the timer may need to be replaced.

- If the timer is activating and the unit still is not turning on, the solenoid valve may need 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 283.2 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.

- Check the chemical 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.
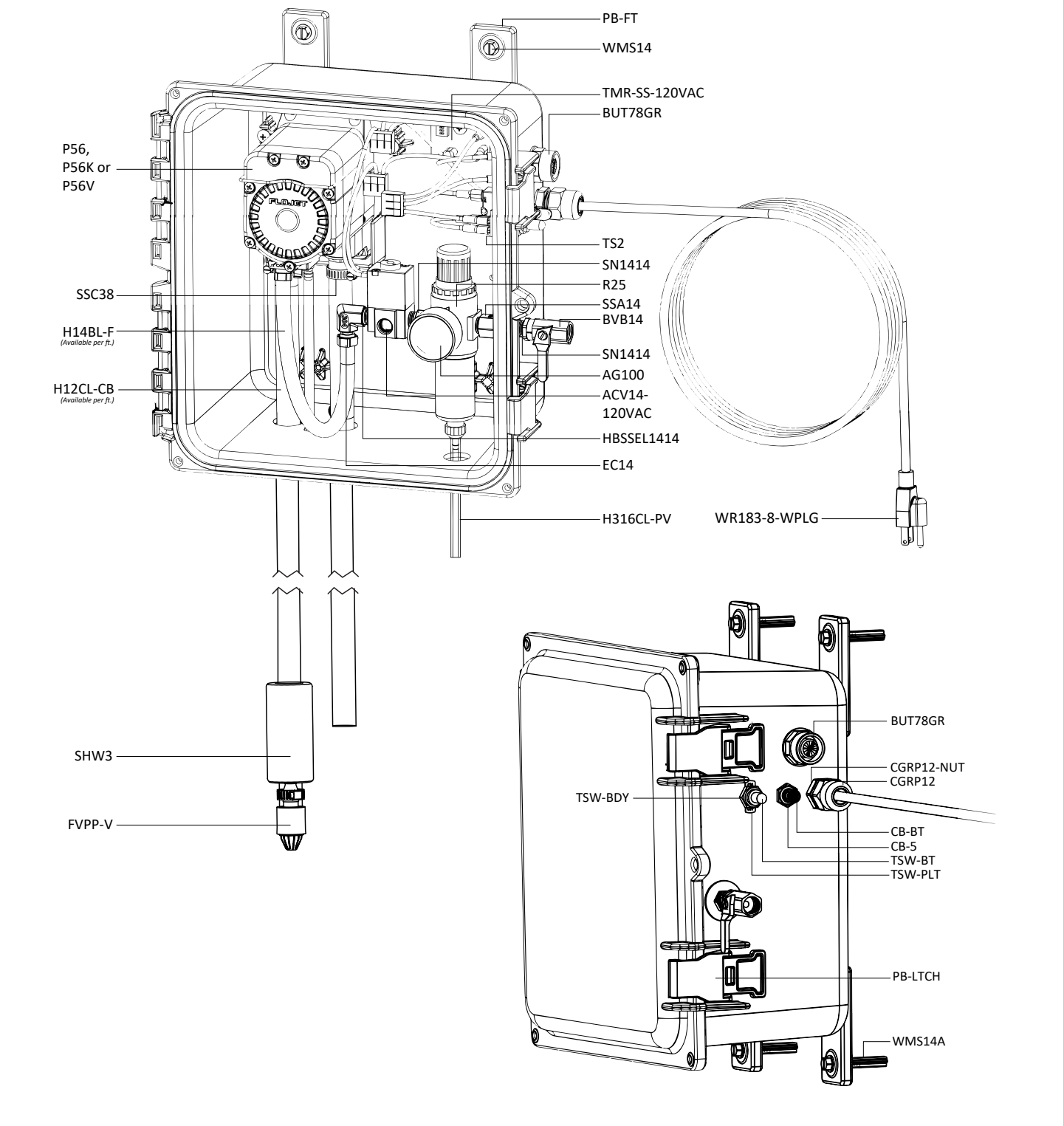
# READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

## CONTROL BOX with MANUAL AIR BUTTON

# READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

## CONTROL BOX with TIMER AND SOLENOID VALVE

PB-FT

WMS14

TMR-SS-120VAC

BUT78GR

P56,
P56K or
P56V

TS2

SN1414

R25

SSA14

BVB14

SSC38

SN1414

H14BL-F
*(Available per ft.)*

AG100

ACV14-120VAC

H12CL-CB
*(Available per ft.)*

HBSSEL1414

EC14

H316CL-PV

WR183-8-WPLG

BUT78GR

CGRP12-NUT

CGRP12

TSW-BDY

CB-BT

CB-5

TSW-BT

TSW-PLT

SHW3

FVPP-V

PB-LTCH

WMS14A

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| ITEM NUMBER | DESCRIPTION |
|---|---|
| AB14 | SMC MECH AIR VALVE PUSH BUTTON BLK |
| ACV14-120VAC | AIR CONTROL VALVE - MAC - 1/4IN FPT IN - 2X 1/4IN FPT OUT - ALUMINUM BODY - 120VAC SOLENOID - NORMALLY CLOSED - 18IN 18AWG FLYING LEADS |
| AG100 | AIR GAUGE - 1/8IN NPT - 0-100 PSI MARKINGS - DRY MODEL |
| B10321 | BOLT - 10-32 X 1IN - STAINLESS STEEL - TRUSS HEAD PHILLIPS |
| B142058-VS | BOLT - 1/4-20 X 5/8IN - STAINLESS STEEL - TRUSS HEAD PHILLIPS - VIBRASEAL |
| B103234 | BOLT - 10-32 X 3/4IN - STAINLESS STEEL - TRUSS HEAD PHILLIPS |
| BRKT-P56 | PUMP BRACKET- STAINLESS STEEL |
| BUT78GR | PUSH BUTTON - FLUSH GREEN CAP - NORMALLY OPEN |
| BVB14 | BALL VALVE - BRASS - NICKEL PLATED - AIR INLET VALVE - 1/4IN FPT X 1/4IN FPT |
| CB-5 | CIRCUIT BREAKER ASSEMBLY - 5 AMP - INCLUDES CLEAR BOOT |
| CB-BT | CLEAR BOOT FOR CIRCUIT BREAKER |
| CGRP12 | CORD GRIP - 1/2IN MPT - BLACK NYLON - CORD RANGE 0.17IN TO 0.45IN - WATER RESISTANT - FOR 7/8IN HOLE - NO NUT INCLUDED |
| CGRP12-NUT | NUT - 1/2NPT - BLACK NYLON |
| EC14 | EAR CLAMP - OETIKER - STAINLESS STEEL - FOR 1/4IN HOSE |
| FVPP-V | FOOT VALVE - POLYPROPYLENE BODY - NOT CUT TO SIZE - VITON CHECK VALVE - BLACK |
| FW14NPT | FLAT WASHER FOR 1/4IN NPT - STAINLESS - 0.57IN ID X 1.28IN OD X 0.08IN 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 |
| HBSS1414 | HOSE BARB - STAINLESS STEEL - 1/4IN MPT X 1/4IN BARB |
| HBSSEL1414 | HOSE BARB - STAINLESS STEEL - ELBOW - 1/4IN MPT X 1/4IN BARB |
| HBSS1438 | HOSE BARB - STAINLESS STEEL - 1/4IN MPT X 3/8IN BARB |
| HBSSEL1814 | HOSE BARB - STAINLESS STEEL - ELBOW - 1/8IN MPT X 1/4IN BARB |
| P14-VS | PLUG - 1/4IN MPT WITH VIBRASEAL - COUNTERSUNK HEXAGON |
| P18 | PLUG - 1/8IN MPT - 304 STAINLESS STEEL - SQUARE HEAD |
| P56 | PUMP WITH SANTOPRENE SEALS - INCLUDES HOSE BARBS, AIR FITTING, AND EXHAUST BARB |
| P56V | PUMP WITH VITON SEALS - INCLUDES HOSE BARBS, AIR FITTING, AND EXHAUST BARB |
| P56K | PUMP WITH KALREZ SEALS - INCLUDES HOSE BARBS, AIR FITTING, AND EXHAUST BARB |
| HB14P | 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-12117 | POLY BOX ASSEMBLY - 12IN X 11IN X 7IN - GRAY POLYPROPYLENE - INCLUDES BRAND LABEL AND MOUNTING HARDWARE |
| PB12117-BOX | POLY BOX - GRAY POLYPROPYLENE - FOR PBA-12117 |
| PB12117-LID | POLY BOX LID - GRAY POLYPROPYLENE - FOR PB-12117 - INCLUDES PB-GSKT ROPE SEAL AND BRAND LABEL |
| 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 |
| R25 | REGULATOR - AIR - 2X 1/4IN FPT AND 2X 1/8IN FPT PORTS WITH BOWL AND FILTER - NO GAUGE |
| 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 |
| SSA14 | STAINLESS ADAPTOR 1/4 MPT X 1/4 FPT |
| SSC12 | SCREW BAND CLAMP - STAINLESS STEEL - FOR 1/2IN HOSE |
| SSC38 | SCREW BAND CLAMP - STAINLESS STEEL - FOR 3/8 IN HOSE |
| TSW-BDY | TOGGLE SWITCH - BODY - SINGLE POLE SINGLE THROW - NICKEL-PLATED BRASS - 1/4IN SPADE TERMINALS - 1/2IN MOUNTING HOLE - 15/32-32 KEYED THREADED BUSHING |
| TSW-PLT | TOGGLE SWITCH - ON/OFF PLATE - NICKEL-PLATED STEEL - MOUNTING HOLE FOR 15/32 KEYED BUSHING |
| TSW-BT | TOGGLE SWITCH - MOUNTING BOOT - BLACK SILICONE RUBBER - 15/32-32 INTEGRATED NUT |
| TMR-SS-120VAC | TIMER - SINGLE SHOT - 1SEC TO 1023SEC ADJUSTABLE DIGI-SET - 24VAC TO 120VAC - 10A MAX - 1/4IN SPADE TERMINALS |
| WC1416-FRK6 | WIRE CONNECTOR - FOR 14 TO 16 GAUGE WIRE - #6 NARROW FORK TERMINAL - BLUE PVC INSULATED |
| WC1416-FSPD14 | WIRE CONNECTOR - FOR 14 TO 16 GAUGE WIRE - 1/4IN FEMALE SPADE - BLUE PVC INSULATED |
| WC1012-FSPD14 | WIRE CONNECTOR - FOR 10 TO 12 GAUGE WIRE - 1/4IN FEMALE SPADE - YELLOW NYLON INSULATED |
| 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 |
| WR183-8-WPLG | WIRE CORD WITH US STANDARD UNPOLARIZED GROUNDED PLUG - 18AWG 3 CONDUCTOR - 8FT LONG - BLACK RUBBER JACKET - EPDM INSULATION - TYPE SJOOW - 10A RATING |