
USER MANUAL

MODEL NUMBER:

CT1A5

CT1D5

CT2A5

CT2D5

CT5A5

CT5D5

AND RELATED UNITS

Chemical Transfer Unit

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 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 (7 bar).
- Do not exceed a fluid temperature of 100°F (37°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.

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

OPTIONS			
	Pump Seal Material	Operating Type	
CT	Santoprene (1)	Manual air button (A)	5
	Viton (2)	Timer and solenoid valve (D)	
	Kalrez (5)		

Add bold option codes to item number as shown.

Examples:

- CT1A5 (Single product transfer unit with Santoprene pump seals and manual air button)
- CT2D5 (Single product transfer unit with Viton pump seals and timer and solenoid valve)
- CT5A5 (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 (R25) factory set at 50 psi (3.4 bar). Operating range is 40 to 80 psi (3 to 5 bar) with 2 CFM (56.6 l/min)	
Liquid temperature range	40-100°F (4.4-37°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.

READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

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 $\frac{3}{16}$ 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 $\frac{3}{8}$ 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.

For CT units with a timer and solenoid valve

1. Set single-shot timer (TSS11023) to desired run time, as described in the timer adjustment instructions. Make sure run time will not exceed tank capacity.

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.

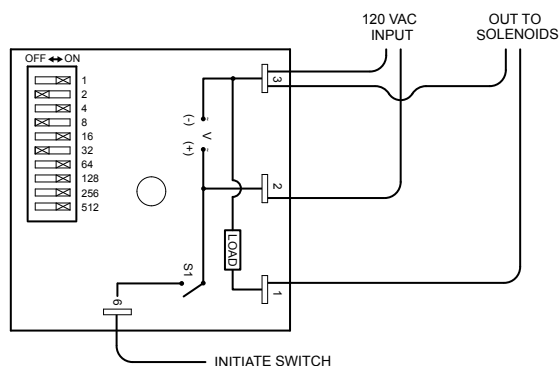
Maintenance Instructions:

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 located 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.

TIMER ADJUSTMENT INSTRUCTIONS



The TSS11023 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.

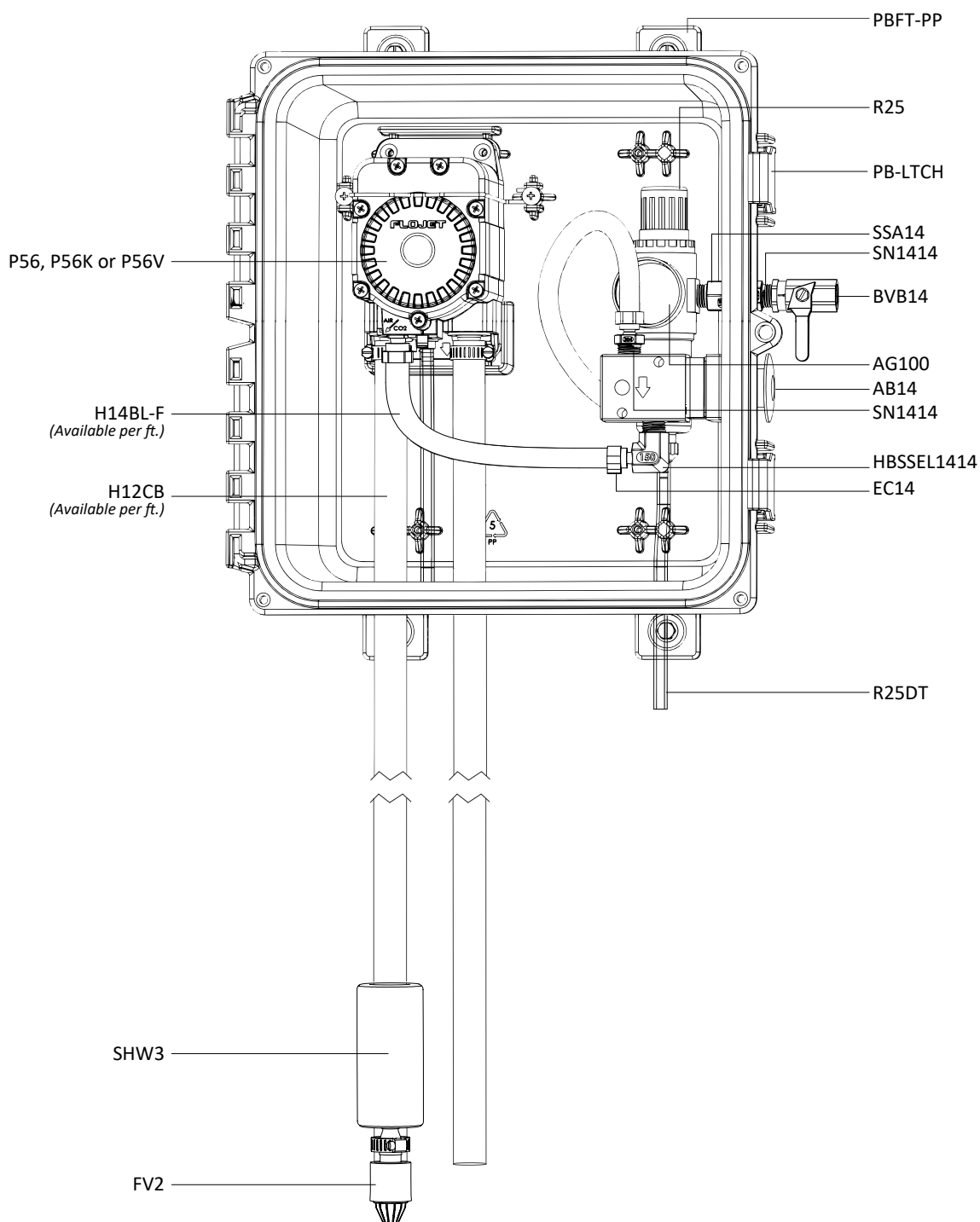
READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

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 (3 to 5 bar) with 5 to 10 CFM (141.64 to 283.30 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, 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.

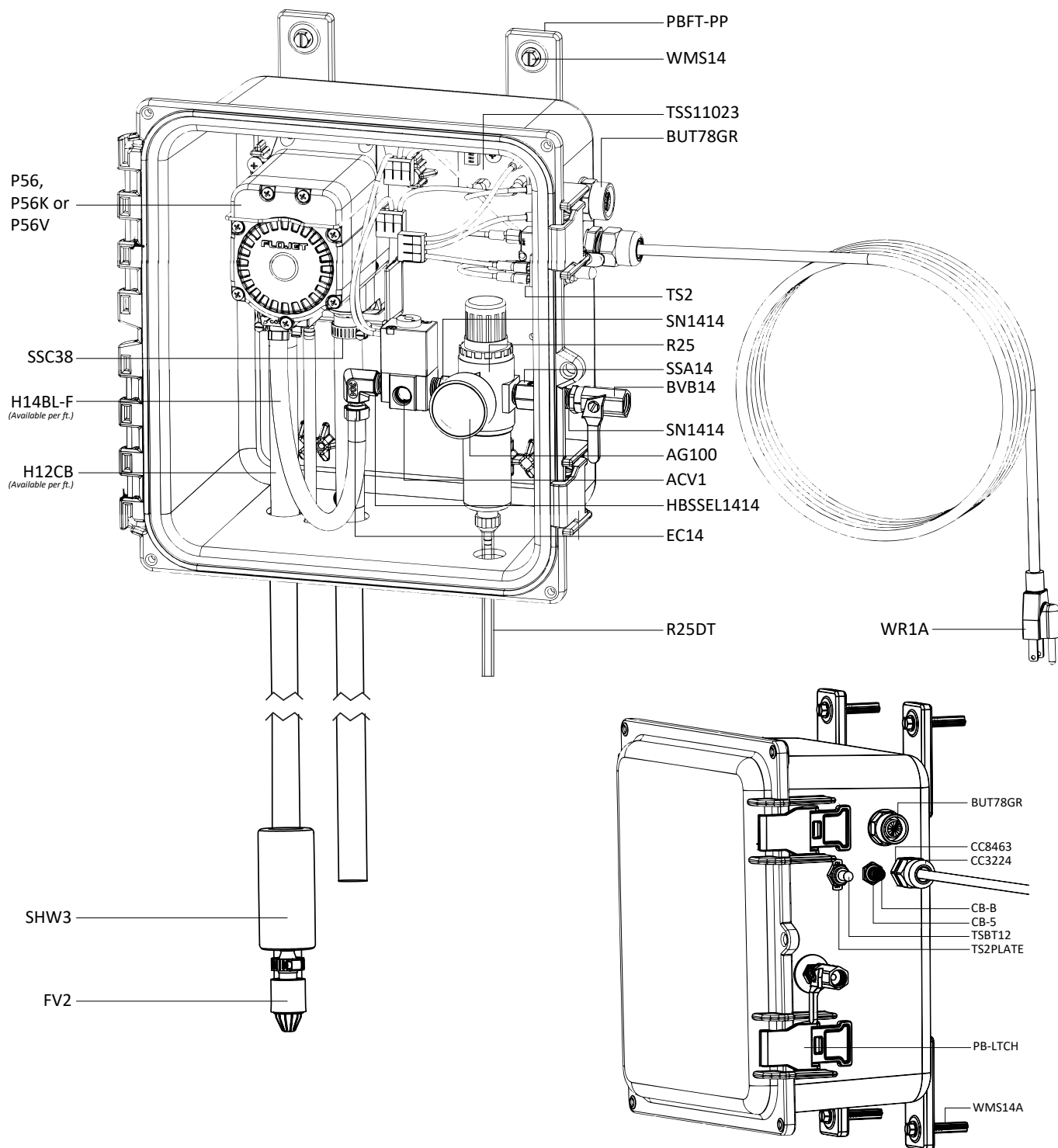
READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

CONTROL BOX with MANUAL AIR BUTTON



READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

CONTROL BOX with TIMER AND SOLENOID VALVE



READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

ITEM NUMBER	DESCRIPTION
AB14	SMC MECH AIR VALVE PUSH BUTTON BLK
ACV1	MAC VALVE 1/4in 110VAC
AG100	AIR GAUGE-1/8IN NPT-100 PSI DRY MODEL
B10321	10-32 X 1 PHIL TRUSS MACH SCR 18-8
B142058-VS	1/4-20 X 5/8IN BOLT-STAINLESS-TRUSS HEAD PHILLIPS-VIBRASEAL
B103234	10-32 X 3/4 PHIL TRUSS MACH SCR 18-8
BH142015	BUTTON HEAD SOCKET CAP - 1/4 - 20 x 1.5 STAINLESS STEEL
BRKT-P56	PUMP BRACKET- STAINLESS STEEL
BUT78GR	PUSH BUTTON - FLUSH GREEN CAP - NORMALLY OPEN
BVB14	AIR INLET VALVE-1/4IN FPT X 1/4IN FPT
CB-5	5 AMP CIRCUIT BREAKER-UL1077
CB-B	CLEAR BOOT FOR CIRCUIT BREAKER
CC3224	1/2 NPT STRAIN RELIEF GRIP FITTING - BLACK
CC8463	1/2 NPT LOCKNUT - BLACK
EC14	OETIKER EAR CLAMP FOR 1/4IN HOSE
FV2	FOOT VALVE, VITON, BLACK
FWLG14	FLAT WASHER-0.569 ID X 1.28 OD X .078 THK-18-8 SS
H12CB	1/2 IN (ID) CLEARBRAID RF SERIES
H14BL-F	1/4IN BLUE HOSE-HYBRID TPE-AVAILABLE PER FT
HBSS1414	STAINLESS HOSE BARB 1/4 MPT X 1/4 BARB
HBSEL1414	STAINLESS HOSE BARB 1/4 MPT X 1/4 BARB ELBOW
HBSS1438	STAINLESS HOSE BARB 1/4 MPT X 3/8 BARB
HBSEL1814	STAINLESS HOSE BARB 1/8 MPT X 1/4 BARB ELBOW
P14-VS	COUNTERSUNK PLUG-HEXAGON 1/4 w/VIBRAL SEAL PATCH
P18	PLUG 1/8 MPT HEX HEAD 304 SS
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
PB12117	POLY CONTROL BOX 12X11X7
PBFT-PP	MOUNTING FEET FOR POLYBOX - PB16138 - POLYPROPYLENE
PB-LTCH	POLY BOX LATCH FOR PB16138 AND PB12117
PB-PIN	STAINLESS STEEL HINGE PIN FOR PB16138 AND PB12117
PL12117	CONTROL BOX LID 12X11X7-POLYPROPYLENE-HINGED LOCKABLE LID-INCLUDES GASKET
R25	AIR REGULATOR-TWO 1/4IN FPT PORTS-TWO 1/8IN FPT PORTS-INCLUDES FILTER AND BOWL
R25DT	3/16 X 5/16 CLEAR PVC TUBING - Available per ft.
S1012-HL	10-16 X 1/2 IN SCREW-STAINLESS-HI LO
S1034FHL	10 X 3/4 PHIL FLAT HI-LO THRD SCREW 18-8
SHW3	3in LONG COATED WEIGHT
SN1414	STAINLESS HEX NIPPLE 1/4 MPT X 1/4 MPT
SSA14	STAINLESS ADAPTOR 1/4 MPT X 1/4 FPT
SSC12	STAINLESS SCREW BAND CLAMP FOR 1/2 IN HOSE
SSC38	STAINLESS SCREW BAND CLAMP FOR 3/8 IN HOSE
TS2	TOGGLE SWITCH SPST
TS2PLATE	ON/OFF SWITCH PLATE
TSBT12	TOGGLE SWITCH BOOT
TSS11023	SINGLE SHOT TIMER 1-1023S 19-144VAC
WC14FRK	14-16 - INSULATED NARROW FORK TERM. CONNECTOR
WCB14F	14-16 - 1/4 FEM INSULATED CONNECTOR
WCB14FY	10-12 - 1/4in FEMALE INSULATED CONNECTOR
WMS14	14 X 1 1/4 HEX W/H SMS SLOTT, S/S
WMS14A	5/16 X 1 1/2 STRAIGHT PLASTIC ANCHOR
WR1A	18/3 SJOOW 90 BLACK N.A. W/ 5-15P & 7in ROJ