
USER MANUAL

**MODEL NUMBER:
DS5
DS5K
DS5V
AND RELATED UNITS**

Air Operated Doorway Foam 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.
- 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 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.
- Never use unit if it is damaged or leaking.
- Disconnect unit from electrical power source before servicing.

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.

Air Operated Double Diaphragm Pump Options:

- P56.....Flojet polypropylene body with Santoprene diaphragm
- P56V..... Flojet polypropylene body with Viton diaphragm
- P56K..... Flojet polypropylene body with Kalrez diaphragm

Acceptable Products: Alkaline cleaners, Caustic cleaners, Sanitizers, and Acids.

* D-Limonene and peracetic acid may only be used with Kalrez pump

* Chlorine may only be used with Viton or Kalrez pump

DO NOT USE: All hydrocarbons

Specifications:

- Tubing50 feet polyethylene, 1/2 inch O.D.
- Foam output.....25 gallons/minute
(94 liters/minute)
- Foam Pattern..... 5 foot wide X 12 foot in length
(one nozzle assembly)

Requirements:

Compressed air 40 to 80 PSI (3 to 5 bar) with 3.5 to 8 CFM (99.15 to 226.62 l/min)

Chemical requirements: follow all instructions from chemical manufacturer.

Electrical requirement.....115VAC - 60HZ
(GFI Protected Circuit)

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Installation Instructions:

1. Read all instructions before installing the foam unit.
2. Remove all parts from the shipping box.
3. Select the desired area to mount the control box. The control box should be mounted on a vertical wall.
4. Mount the control box using four of the screws and anchors provided
Note: When drilling holes for the plastic anchors provided with the screws, use a 3/16 inch drill bit
5. Mount the spray tip assembly in the desired location using the two SS brackets
6. After the control box and nozzle assembly are mounted, run 1/2 inch tubing from the solution discharge to the elbow fitting of the nozzle assembly. It is important the solution line is plugged into the elbow fitting of the nozzle assembly or the foam quality will be reduced. Run the 1/2 inch tubing from the air output of the control box to the nozzle assembly.
7. Attach a compressed air line from your air compressor to the air inlet valve
Note: The air compressor needs to be able to maintain at least 4 cfm @ 60 psi
8. Set the timer (See timer adjustment instructions)
9. Make sure the toggle switch is in the "off" position and plug the unit into a GFCI protected 110 VAC outlet

Operation Instructions:

1. To activate the unit, turn the toggle switch to the "on" position
2. If necessary, adjust the "wet foam/dry foam" valve to desired wetness or dryness of foam following the steps below:
 - a. Close valve completely in clockwise direction
 - b. Open valve in clockwise direction 2-3 turns

c. With the unit running, continue to open the valve in 1/4 turn increments allowing 30 seconds between adjustments until desired foam consistency is achieved.

Note: If the valve is opened too far, it can cause the pump to stall. If this occurs, repeat steps a, b, and c.

3. When running multiple tip assemblies off one control box, it is recommended to change spray nozzle based on chart specification below:

Item Number	Number of Tip Assembly	Recommended Spray Nozzle
GK7T	1	ST80200SS
GK7T-2	2	ST80100SS
GK7T-3	3	ST8060-12SS

Air operation range: 40 to 80 PSI (3 to 5 bar) with 3.5 to 8 CFM (99.15 to 226.62 l/min)

Troubleshooting Instructions:

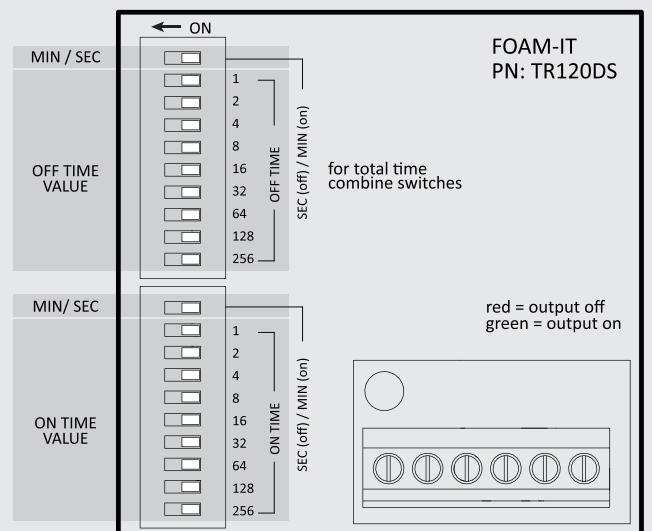
Disconnect power before servicing.

1. Check for proper air pressure (60 psi or more into unit, 60 psi on the air gauge).
2. 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.
3. If needle valve is open too far the pump will cycle improperly due to lack of air pressure, if this occurs, reset valve as described in operation instruction.
4. Make sure proper foaming chemical and concentration is being used.
5. If air passes through the pump without cycling, replace pump.
6. If solution backs up into the air regulator bowl, the check valve needs to be replaced.
7. If foam comes out wet, no matter where the needle valve is positioned, the check valve may need to be replaced.

The TR120DS-A is an adjustable repeat cycle timer with the ON time operating first. ON and OFF times can range from 1 second to 511 minutes.

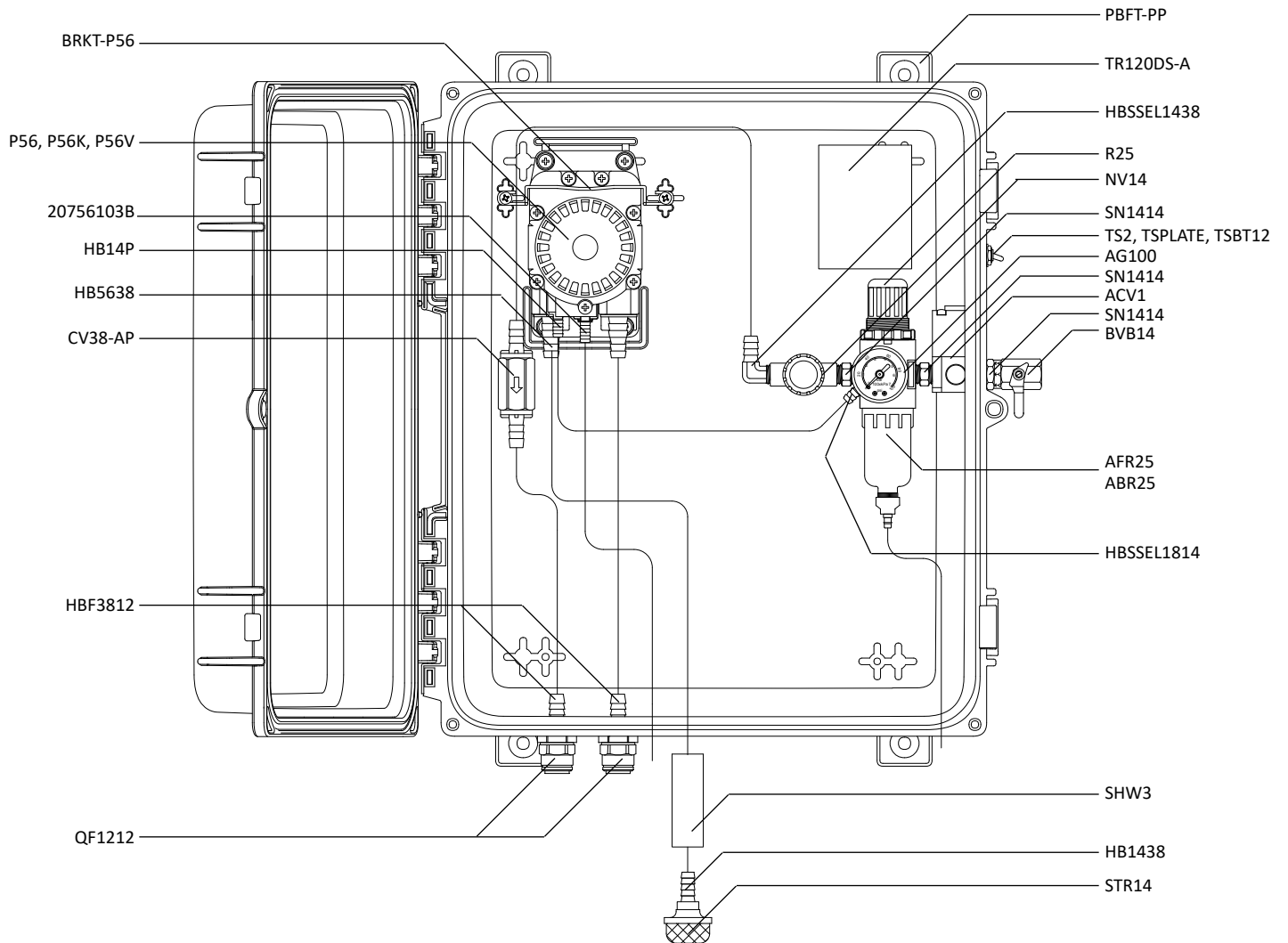
To set the timer:

1. Starting with the OFF time, move the top dip switch to the left for MIN (minutes) or to the right for SEC (seconds) to select the desired time interval.
2. The next 9 dip switches will be used to control the total active time. To the left is active and to the right is inactive. Combine the numbers of active dip switches to achieve the desired time. The increments are 1, 2, 4, 8, 16, 32, 64, 128, 256.
3. Repeat the above steps for the ON time setting.
4. Timer indicator light will appear red when unit output is off. The indicator turns green when output is on.



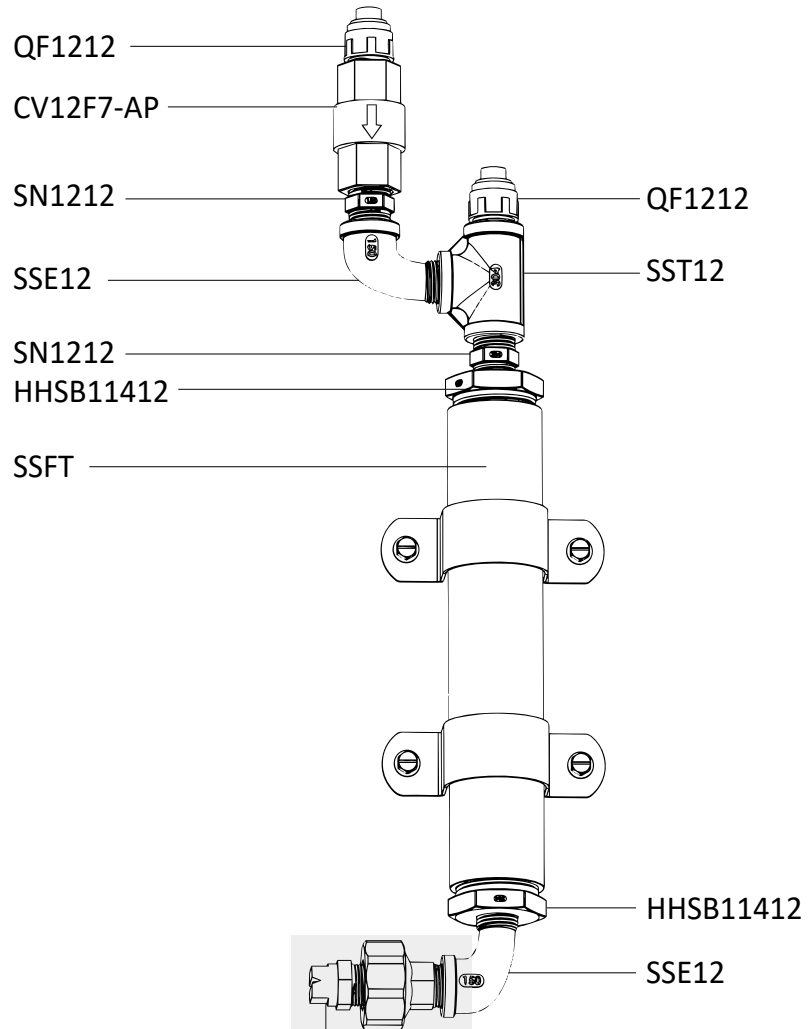
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Inside View - Control Box



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NOZZLE ASSEMBLY

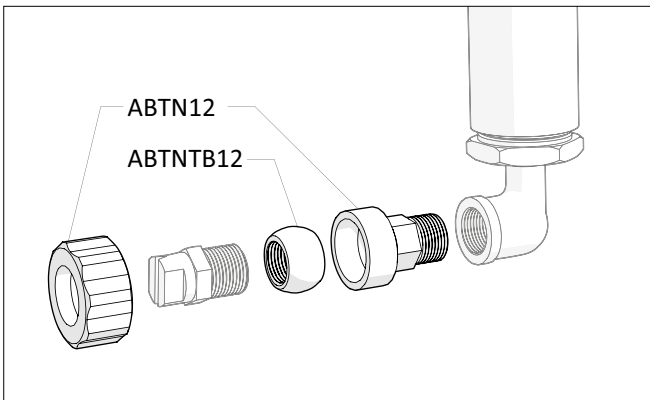


ST80200SS,
ST80100SS
or ST8060-12SS

Spray tip size varies based on number of nozzle assemblies used - see specifications chart for more information.

NOZZLE ASSEMBLY DETAIL

This unit includes an adjustable ball-type nozzle that may be installed to hold the spray tip as shown.



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ITEM NUMBER	DESCRIPTION
20756103B	Polypro G57 Air Port x HB Straight, w/ Viton o-ring
ABR25	METAL AIR BOWL for R25
ABTN12	1/2 MPT x 1/2 FPT ADJUSTABLE BALL SOCKET- PP
ABTNTB12	1/2 MPT THREADED BALL FOR ABTN12 - PP
ACV1	MAC VALVE 1/4in 110VAC
AFR25	AIR FILTER for R25
AG100	AIR GAUGE-1/8IN NPT-100 PSI DRY MODEL
B10321.25	10-32 X 1 1/4 PHIL TRUSS MACH 18-8
B103225	10-32 X 1/4in PHIL MACH SCREW 18-8
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
CV12F7-AP	1/2 CHECK VALVE 7 LB SPRING - HASTELLOY SPRING - EP SEALS - ACID PROOF - BLK/WHT CHK
CV38-AP	CHECK VALVE-3/8IN BARBS-PVC BODY-HASTELLOY SPRING-TEFLON BALL-WHITE
EC14	OETIKER EAR CLAMP FOR 1/4IN HOSE
FWLG14	FLAT WASHER-0.569 ID X 1.28 OD X .078 THK-18-8 SS
H12CP	1/2IN OD POLYETHYLENE TUBING - NATURAL
H14BL-F	1/4IN BLUE HOSE-HYBRID TPE-AVAILABLE PER FT
H38BL-F	3/8IN BLUE HOSE-HYBRID TPE-AVAILABLE PER FT
HB1438	1/4in MPT X 3/8in HOSE BARB (PLASTIC)
HBF3812	HOSE BARB 3/8 X FEMALE PIPE THREAD 1/2 IN
HB5638	HOSE BARB FOR P56 PUMP
HBSEL1438	STAINLESS HOSE BARB 1/4 MPT X 3/8 BARB ELBOW
HBSEL1814	STAINLESS HOSE BARB 1/8 MPT X 1/4 BARB ELBOW
HBF3812	HOSE BARB 3/8 X FEMALE PIPE THREAD 1/2 IN
HHSB11412	HEX HEAD STAINLESS BUSHING 1-1/4 MPT X 1/2 FPT
NV14	NEEDLE VALVE-1/4IN NPT-INCLUDES BLACK KNOB
<i>NV14-HNDL</i>	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
PB16138	POLYPROPYLENE CONTROL BOX - WORKING DIMS 16x13x8 - PUMP MOUNT

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
PHC14	BLACK POLY HOSE CLAMP
PL16138	CONTROL BOX LID 16X13X8-POLYPROPYLENE-HINGED LOCKABLE LID-INCLUDES GASKET-WITH LABEL
QF1212	QUICK FIT-1/2 MPT X 1/2 OD TUBE-POLYPROPYLENE
QFT12	UNION TEE 1/2in TUBE - POLYPROPYLENE
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
SN1212	STAINLESS HEX NIPPLE 1/2 MPT X 1/2 MPT
SN1414	STAINLESS HEX NIPPLE 1/4 MPT X 1/4 MPT
SSC38	STAINLESS SCREW BAND CLAMP FOR 3/8 IN HOSE
SSE12	STREET ELBOW 1/2in - 316 S.S.
SSE34	S.S. STREET ELBOW 3/4in
SSFT	POLISHED - STAINLESS FOAM TUBE 1-1/4 FPT - 9-1/2 IN LONG
SSFTB	STAINLESS FOAM TUBE BRACKET
SSMESH	STAINLESS STEEL MESH- 1 ball
SSST	SCREEN DISC .687 DIA. 10 X 10 MESH @ .020 DIA. 300 SERIES S.S.
SSST114	SCREEN DISC 1 1/4IN DIAMETER - SS
SST12	STAINLESS TEE 1/2 FPT
ST80200SS	SPRAY TIP-80 DEGREE-20.0 GPM-STAINLESS-1/2 MPT
STR14	40 MESH SUCTION LINE STRAINER 1/4 FNPT
TR120DS-A	REPEAT CYCLE TIMER - ADJUSTABLE DIGI-SET - 120 VAC
TS2	TOGGLE SWITCH SPST
TS2PLATE	ON/OFF SWITCH PLATE
TSBT12	TOGGLE SWITCH BOOT
WCB14F	14-16 - 1/4 FEM 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 POWER CORD WITH GROUNDED PLUG-9FT LONG-BLACK