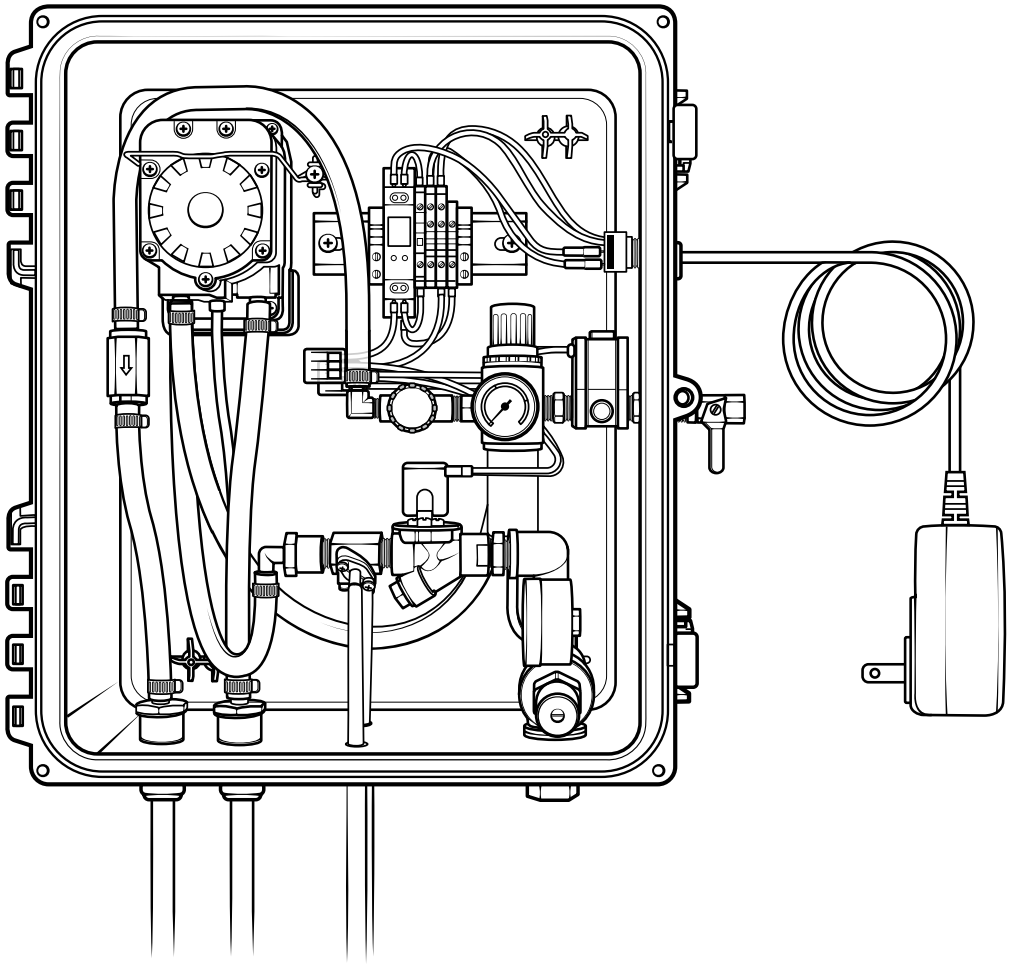
Twin-Line Concentrate Doorway Foam Unit for 2-Part Products

Service Manual

DS-WC-2P-TL



READ ALL INSTRUCTIONS BEFORE USING OR SERVICING THIS UNIT. KEEP THIS MANUAL IN A LOCATION THAT IS READILY AVAILABLE TO USERS AND SERVICE TECHNICIANS.

English (Original Instructions)

Scan this code for service manual

Safety

⚠ WARNING

PEOPLE OR OBJECTS CAN BE HURT OR DAMAGED IF THIS UNIT IS NOT USED CORRECTLY!

Failure to read all the instructions before operating the unit may result in personal injury or death from the improper use or the chemical solution. Anyone handling, operating or using the unit must read, and understand, the instructions in the manual. The buyer assumes all responsibility for safety and proper use in accordance with the instructions.

Using, or servicing, the unit without proper protective clothing, gloves, and eye wear may result in serious injury such as burns, rashes, eye, throat or lung damage and death. Always wear protective clothing, gloves, and eye wear when using, or servicing, the unit. Protect eyes, skin, and lungs against drifting spray.

Chemical solutions may pose a health risk and death if they contact the skin or eyes, are inhaled or swallowed. Always read, and follow, all chemical safety precautions and handling instructions provided by the chemical manufacturer and the Safety Data Sheet (SDS) associated with the chemical solution being used before using the unit.

Pressure within the equipment may cause an unexpected release of the chemical solution and cause serious injury such as burns, rashes, eye damage, throat or lung damage and death. Always depressurize and clean the unit after each use. Never leave the unit unattended while pressurized.

Using the unit with fluid temperatures above 100°F (37.8°C) may result in scalding, burns, serious injury or death. DO NOT use a solution with a temperature above 100°F (37.8°C).

Operating the unit when damaged or leaking may result in exposure to chemical solutions, serious injury or death. Never use the unit if it is damaged or leaking.

Using incoming air pressure exceeding 100 psi (6.9 bar) may result in pressure buildup, explosion, serious injury or death. DO NOT exceed 100 psi (6.9 bar) incoming air pressure when operating unit.

Use of hydrocarbons and flammable products may result in explosions, fire and serious injury or death. Never use hydrocarbons or flammable products with the unit.

Performing any maintenance with the unit turned ON, plugged into an electrical power source or connected to the air and water supply may serious injury or death. Always ensure that the unit has been turned OFF, unplugged from the electrical power source, and disconnected from the air/water supply before conducting any maintenance.

Mixing an alkaline with an acid may result in a chemical reaction. Overheating of the mixture may cause it to splatter caustic compounds or release hazardous fumes, gas and vapors. Always flush the unit with fresh water thoroughly when switching from an alkaline to an acid or an acid to an alkaline.

NOTICE

Servicing, or modification, of this unit with parts not listed in this manual may cause the unit to operate improperly. Do not use unauthorized parts when servicing the unit.

Use of an air lubricator before the unit may result in diminished performance and damage to the unit. Do not use an air lubricator before the unit.

Moisture in the air lines will damage the pump and diminish the pumps life. The air must be filtered, clean, dry and free of moisture. If needed, install an air dryer 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

Service Guide

⚠ WARNING

Performing any maintenance with the unit turned ON, plugged into an electrical power source and connected to the air and water supply may serious injury or death. Always ensure that the unit has been turned OFF, unplugged from the electrical power source, and disconnected from the air/water supply before conducting any maintenance.

Servicing, or modification, of this unit with parts not listed in this manual may cause the unit to operate improperly. Do not use unauthorized parts when servicing the unit.

Maintaining Your Unit

To keep your 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 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, install a water separator (sold separately) before the unit.

Servicing Your Unit

Most repairs on the unit can be performed with the following tools:

- Crescent wrench (2x)
- $^{7}/_{16}$ in. (11 mm) open-ended wrench
- Flat head screwdriver
- Thread seal tape
- #2 Phillips head screwdriver
- #3 Phillips head screwdriver
- Hose cutters
- Knife

Troubleshooting Your Unit

If your unit is not operating properly, try using these troubleshooting tips:

Issue	Solution
Air Regulator Bowl or Air Filter has debris such as water, oil, or rust particles	• Clean by unthreading the air regulator bowl from the air regulator.
Pump is cycling improperly due to lack of air pressure	• The needle valve is open too far. Close and readjust the needle valve as described in the operation section. • Ensure proper foaming chemical and concentration are being used.
The solution backs up into the air regulator bowl.	• The check valve needs to be replaced.
Foam comes out wet, no matter where the needle valve is positioned	• 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 3.5 to 8 CFM (99.1 to 226.5 l/min). • The check valve may need to be replaced.
The unit operates at a reduced pressure	• 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 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 for proper water pressure on the water pressure gauge. To check the pressure: **1.** Activate the unit and allow it to run through an on time cycle. **2.** During the subsequent off time cycle, check the water pressure gauge. The pressure should read 30 psi (2.1 bar) during the off time cycle or when dead-headed. **3.** 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) when dead-headed. Setting the pressure higher or lower may damage the unit or cause it to malfunction.

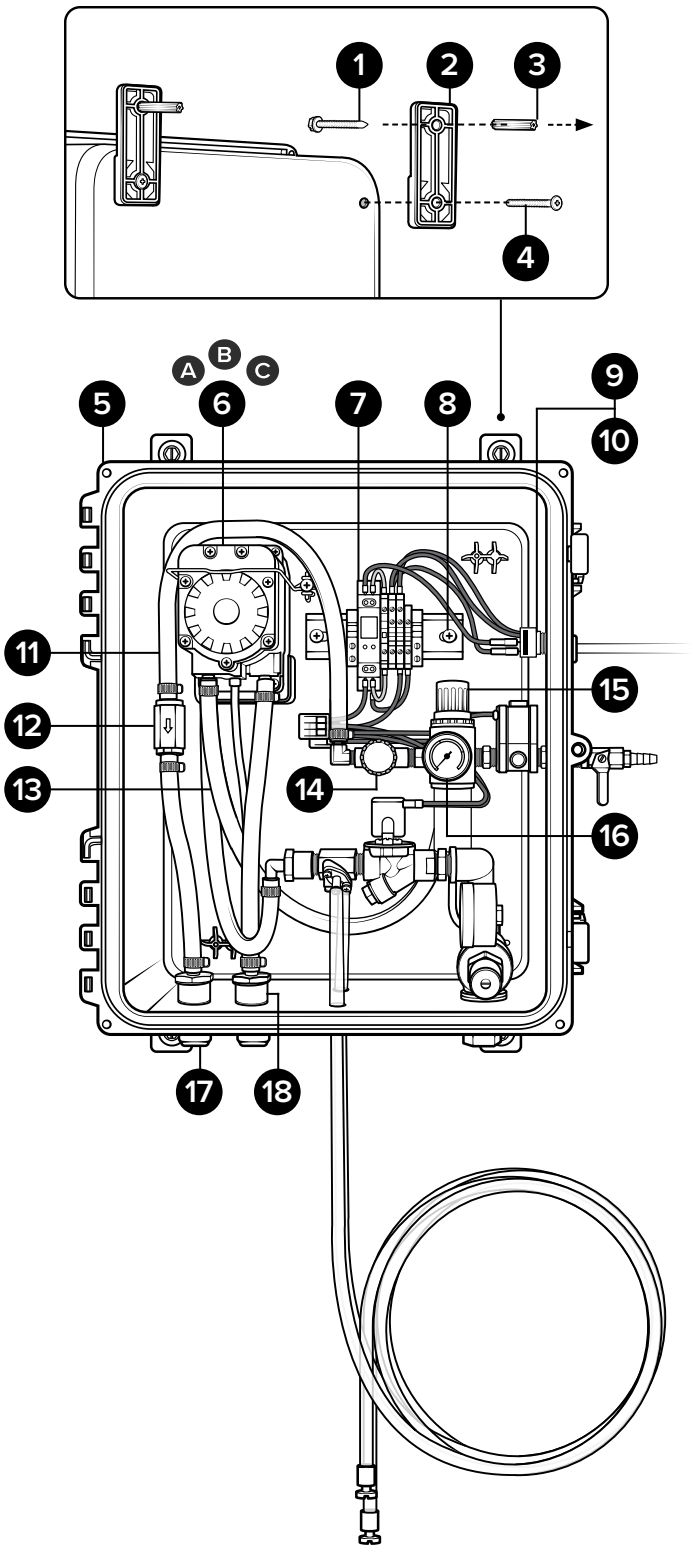
Control Box Assembly

Inside view

DS-WC-2P-TL-CB:
Control box assembly for two product concentrate twin line doorway foam unit with 24VDC timer - Santoprene pump

Additional control box pump options:
DS-WCK-2P-TL-CB: Kalrez pump
DS-WCV-2P-TL-CB: Viton pump

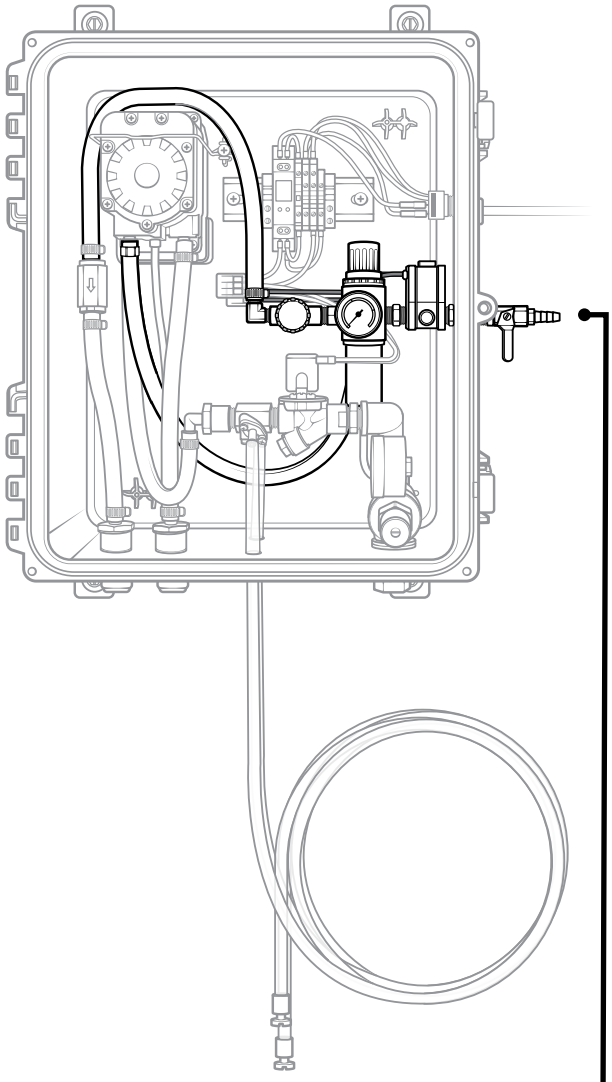
Item number		Description
1	WMS14	Wall mount screw - #14 x 1 ¼ in. - Stainless steel - hex head slotted
2	PB-FT	Poly box foot - gray polypropylene
3	WMS14A	Wall mount screw anchor - #14 x 1 ¼ in. - plastic - 5⁄16 in. drill size
4	S1034-FH-HL	Screw - #10 x ¾ in. - stainless steel flat head Phillips - hi-lo thread
5	PBA-16138	Poly box assembly - 16 in. x 13 in. x 8 in. - gray polypropylene - includes mounting hardware
6	**A** P56	Pump with Santoprene seals - includes hose barbs, air fitting, and exhaust barb
	B P56K	Pump with Kalrez seals
	C P56V	Pump with Viton seals
7	TMRA-RPT-24VDC	Timer assembly - repeat cycle - 24VDC - 5A resettable circuit protector - includes 120VAC NA power cord
8	S1012-HL	Screw - #10 x ½ in. - stainless steel - round head Phillips - hi-lo thread
9	TSW-BDY	Toggle switch - body - single pole single throw - nickel-plated brass - ¼ in. spade terminals - ½ in. mounting hole - 15⁄32-32 keyed threaded bushing
10	TSW-BT	Toggle switch - mounting boot - black silicone rubber - 15⁄32-32 integrated nut
11	H38BL-F	⅜ in. id blue hose - hybrid TPE - available per ft.
12	CV38-AP	Check valve - ⅜ in. barbs- PVC body- Hastelloy spring - Teflon ball - white
13	H14BL-F	¼ in. id blue hose - hybrid TPE - available per ft.
14	NV14	Needle valve - ¼ in. NPT - includes black knob
15	R25	Regulator - air - 2x ¼ in. FPT and 2x ⅛ in. FPT ports with bowl and filter - no gauge
16	AG100	Air gauge - ⅛ in NPT - 0-100 PSI markings - dry model
17	QF1212	Quick fit - ½ MPT x ½ od tube-polypropylene
18	HBF1238	Hose barb - polypropylene - ½ in. FPT x ⅜ in. barb

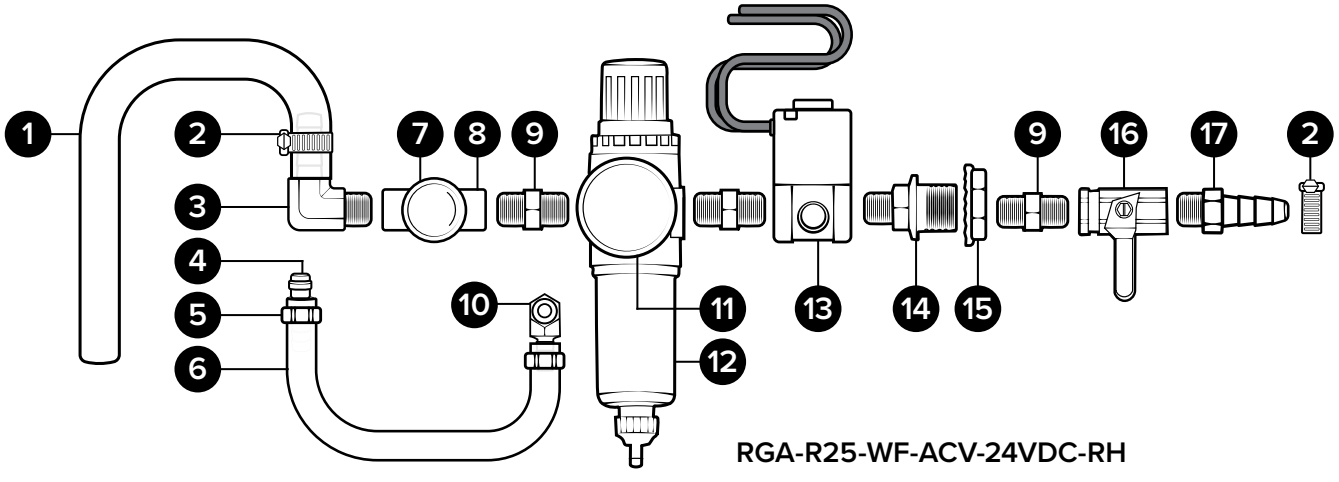


Control Box Sub-assemblies

RGA-R25-WF-ACV-24VDC-RH:
Air regulator assembly for wall mounted foam units - includes air gauge, needle valve, 24VDC valve, air inlet valve, screw band clamp, and hose barb - for use on right hand side of box

Item number		Description
1	H38BL-F	⅜ in. id blue hose - hybrid TPE - available per ft.
2	SSC38	Screw band clamp - stainless steel - for ⅜ in. hose
3	HBSSEL1438	Hose barb - stainless steel - elbow - ¼ in. MPT x ⅜ in. barb
4	HBB14P	¼ in. hose barb - brass - for G57/P56 air fitting with o-ring
5	EC14	Ear clamp - Oetiker - stainless steel for ¼ in. hose
6	H14BL-F	¼ in. id blue hose - hybrid TPE - available per ft.
7	NV14-HNDL	Black knob for needle valve
8	NV14	Needle valve - ¼ in. NPT - includes black knob
9	SN1414	Stainless hex nipple ¼ MPT x ¼ MPT
10	HBSSEL1814	Stainless hose barb ⅛ MPT x ¼ barb elbow
11	AG100	Air gauge - ⅛ in. NPT - 100 PSI dry model
12	R25	Regulator - air - 2x ¼ in. FPT and 2x ⅛ in. FPT ports with bowl and filter - no gauge
13	ACV14-24VDC	Air control valve - MAC - ¼ in. FPT in. - 2x ¼ in. FPT out - aluminum body - 24VDC solenoid - normally closed - 18 in. 18 AWG flying leads
14	SSA14BKH	Bulkhead adapter - stainless - ¼ NPT x ¼ NPSM
15	SSSFN12	Serrated flange nut - stainless - ½ in.
16	BVB14	Ball valve - brass - nickel plated - air inlet valve - ¼ in. FPT x ¼ in. FPT
17	HBSS1438	Hose barb - stainless steel - ¼ in. MPT x ⅜ in. barb



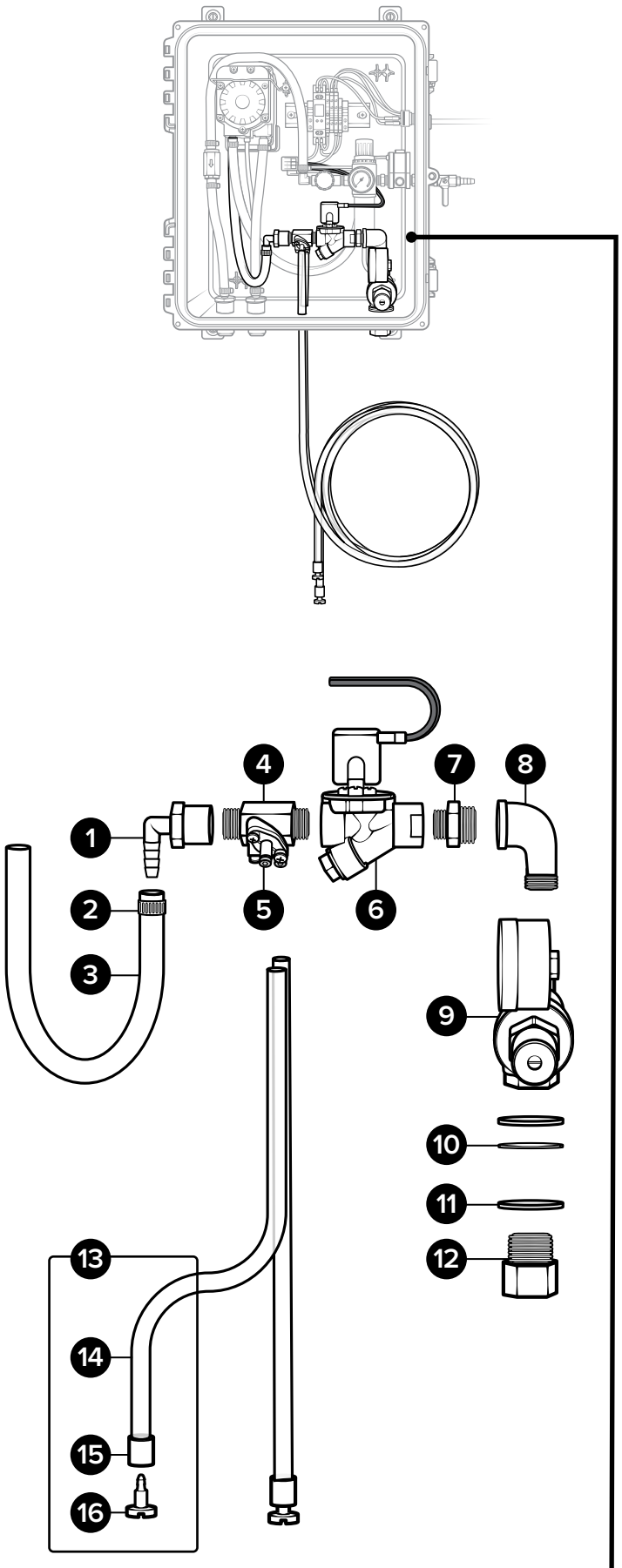


RGA-R25-WF-ACV-24VDC-RH

Control Box Sub-assemblies

WRGA-FCV-24VDC-WC-2P-RH:
Water pressure regulator assembly - includes 24VDC solenoid, left facing gauge, chemical injector, metering tip kit, and 2x suction with strainer

Item number		Description
1	HBELF3838	Hose barb elbow ⅜ in x FPT ⅜ in.
2	SSC38	Screw band clamp - stainless steel - for ⅜ in. hose
3	H38BL-F	⅜ in. id blue hose - hybrid TPE - available per ft.
4	SCI-125X2	Stainless chemical injector - 2 product - 2x ⅜ in. MPT - ¼ in. hose barbs - DEMA rocket series - 2x 0.125 in. orifice - dark green - 3.7 GPM at 100 PSI - accepts MT832 metering tips
5	MTK832	Metering tip kit - 8-32 thread - DEMA lean - includes all fourteen colors
6	FCV38-24VDC	Fluid control valve - DEMA - ⅜ in. FPT - 7 GPM - polypropylene body - Viton diaphragm - 24VDC solenoid - normally closed - 18 in. 18 AWG flying leads
7	PN1238	½ in. MPT x ⅜ in. MPT poly nipple
8	SSE12	Stainless street elbow - 304 stainless steel - ½ in. FPT x ½ in. MPT
9	WR12SS-WRG-RH	Water pressure regulator - stainless steel - FKM seals - ½ in. FPT - assembled with gauge facing left - for use on right side of box
10	FW12NPT	Flat washer for ½ in. NPT - stainless - 0.88 in. id x 1.5 in. od x 0.05 in. thk
11	FW12NPT-THK	Flat washer for ½ in. NPT - thick - stainless - 0.88 in. id x 1.5 in. od x 0.12 in. thk
12	SSA12	Stainless adapter ½ MPT x ½ FPT
13	SCTNA-HA14CL-8-AP	Suction hose assembly - for DEMA C series injector - includes hose, weight, and strainer
14	H14CL-PV	¼ in. id ⅜ in. od clear hose - PVC - available per ft.
15	SHW78	Suction hose weight - ⅞ in. long - white ceramic - for ⅜ in. od tube or H14CL
16	STRH14	Strainer - for ¼ in. hose - clear plastic - integrated filter - 0.66in od



WRGA-FCV-24VDC-WC-2P-RH

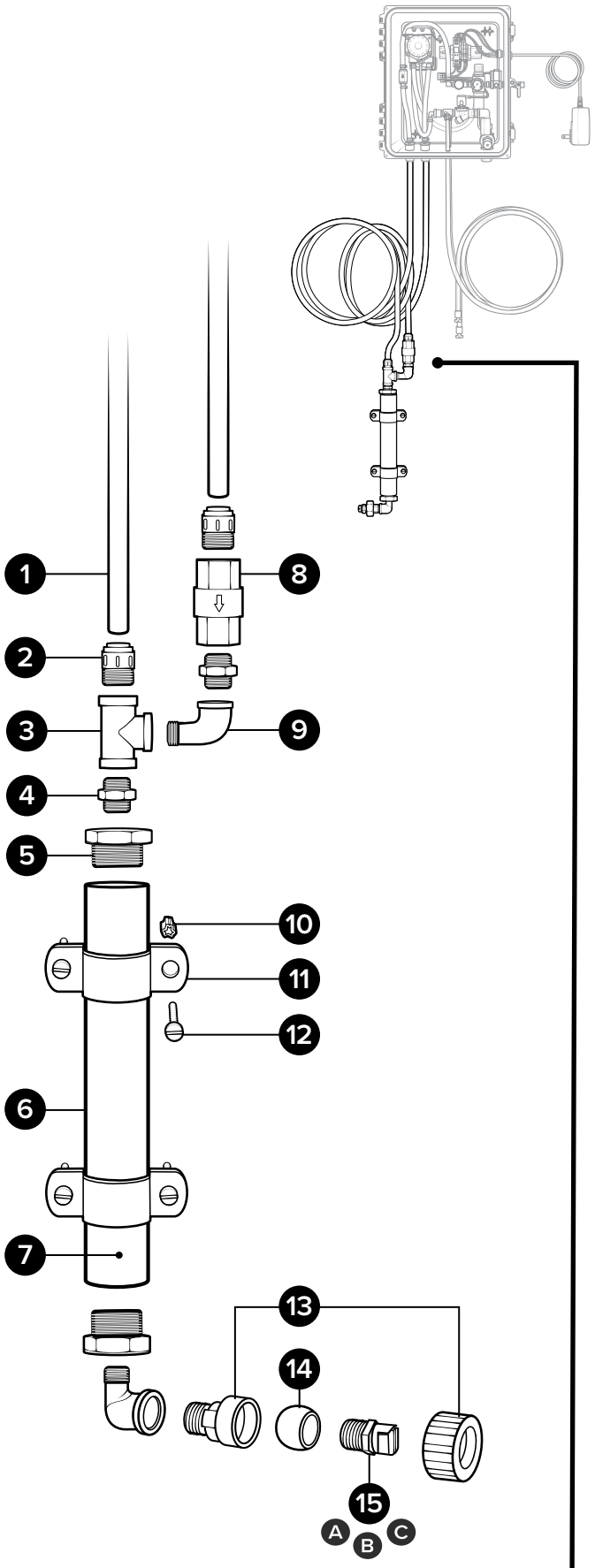
Nozzle Assembly

NZA-DS-TL-1:
Adjustable doorway foam nozzle assembly for twin line units with one nozzle installation - includes mounting hardware, 50 ft. tubing, and ST80200SS fan tip

Additional nozzle assembly options*:
NZA-DS-TL-2: For 2 nozzle install - ST80100SS fan tips (2)
NZA-DS-TL-3: For 3 nozzle install - ST8060-12SS fan tip

Item number		Description
1	TB12N-PE	½ in. od natural tube - polyethylene - available per ft.
2	QF1212	Quick fit - ½ MPT x ½ od tube - polypropylene
3	SST12	Stainless tee ½ FPT
4	SN1212	Stainless hex nipple ½ MPT x ½ MPT
5	HHSB11412	Hex head stainless bushing 1-¼ MPT x ½ FPT
6	W114F912	1 ¼ in. FNPT and 1 ¼ in. FNPT foam tube - polished stainless - 9 ½ in. long
7	MXA-DS-TL	Mixing assembly - doorway system twin line discharge - includes stainless steel mixing media and screen
8	CV12F7	½ check valve 7 lb - Hastelloy spring - Viton seals
9	SSE12	Stainless street elbow - 304 stainless steel - ½ in. FPT x ½ in. MPT
10	WMS14A	Wall mount screw anchor - #14 x 1 ¼ in. - plastic - 5⁄16 in. drill size
11	BRKT-W114	Bracket - stainless steel - for mounting 1 ¼ in. discharge wand
12	WMS14	Wall mount screw - #14 x 1 ¼ in. - stainless steel - hex head slotted
13	NZMNT12-BDY	Nozzle mount body - ½ in. MPT - black and gray polypropylene - accepts nozzle mount ball
14	NZMNT12-BL	Nozzle mount ball - ½ in. FPT - black polypropylene - for nozzle mount body
15	**A** ST80200SS	Spray tip - 80 degree - 20.0 GPM - stainless - ½ MPT
	B ST80100SS	Spray tip - 80 degree - 10.0 GPM - stainless - ½ MPT
	C ST8060-12SS	Spray tip - 80 degree - 6.0 GPM - stainless - ½ MPT

***Note:** Spray tip size varies based on number of nozzles used - refer to **Operation Manual** for more information.



NZA-DS-TL-1
NZA-DS-TL-2
NZA-DS-TL-3