

Best Sanitizers, Inc. Installation & Operation Instructions

Model # MD20007 · BSI Compact Sprayer

REQUIREMENTS

Chemical Concentrate

Water

Temperature	up to 160°F
Pressure	20 - 100 PSI
Flow	2.3 GPM @ 40 PSI
Supply Line	1/2"

Nozzle	2550
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OPTIONS

Additional 32oz Bottles

Bottle, 32oz	# 709082
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Stainless Steel Hose Racks

Hose Rack, Large, SS	# USP20034-L
Hose Rack, Small, SS	# USP20034-SM

WEIGHT & DIMENSIONS

Shipping Weight:	2 lbs.
Shipping Dimensions:	15" x 8" x 5"



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**WARNING! READ ALL
INSTRUCTIONS BEFORE
USING EQUIPMENT!**

OVERVIEW

The BSI Compact Sprayer is a medium volume hose-end spray applicator for diluting and applying chemicals to any surface up close or at a distance. This unit uses standard city water pressure to draw chemical concentrate from the attached bottle and blend it into the water stream. This accurately diluted solution is then projected through the recessed fan nozzle.

SAFETY & OPERATIONAL PRECAUTIONS

- **When connecting to a potable water supply follow all local codes for backflow prevention.**
- For proper performance do NOT modify, substitute nozzle, hose diameter or length.
- Manufacturer assumes no liability for the use or misuse of this unit.
- Wear protective clothing, gloves and eye wear when working with chemicals.
- Always direct the discharge away from people and electrical devices.
- Follow the chemical manufacturer's safe handling instructions.
- NEVER mix chemicals without first consulting chemical manufacturer.

TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

If you are connecting to a potable water supply follow all local codes for backflow prevention.

1. Connect garden hose gun to a standard garden hose.
2. Select and install metering tip.
3. Fill or partially fill bottle with chemical concentrate and attach bottle to foamer. Do NOT over tighten.

Set the chemical dilution ratio by threading one of the color coded metering tips into each chemical check valve. See chemical labels for dilution ratio recommendation or consult your chemical supplier.

- For the strongest dilution ratio do NOT install a colored metering tip.
- The dilution ratios in the metering tip chart are based on water thin chemicals with a viscosity of 1CPS.
- **Thicker chemicals will require a larger tip than the ratios shown in the chart.**
- Application results will ultimately determine final tip color.
- Select the tip color that is closest to your desired chemical strength and thread it into the tip holder. DO NOT OVER TIGHTEN.
- Push the chemical tube over the check valve barb and place the strainer in the chemical concentrate.

TO OPERATE

1. Unscrew the bottle lid, install the selected colored metering tip, add chemical concentrate to the bottle and re-attach. Do not over tighten.
2. Connect to a standard garden hose.
3. Hold the garden hose gun and direct the discharge in a safe direction. Pull the trigger to begin application.
4. Make final metering tip adjustments based on application results. Try the next larger sized metering tip until the results are acceptable. In some cases when the chemical is very thick you may have to dilute it slightly.
5. When application is complete, release the trigger.
6. To rinse, quick disconnect the bottle from the gun and rinse before the chemical dries.

Metering Tip Selection Chart

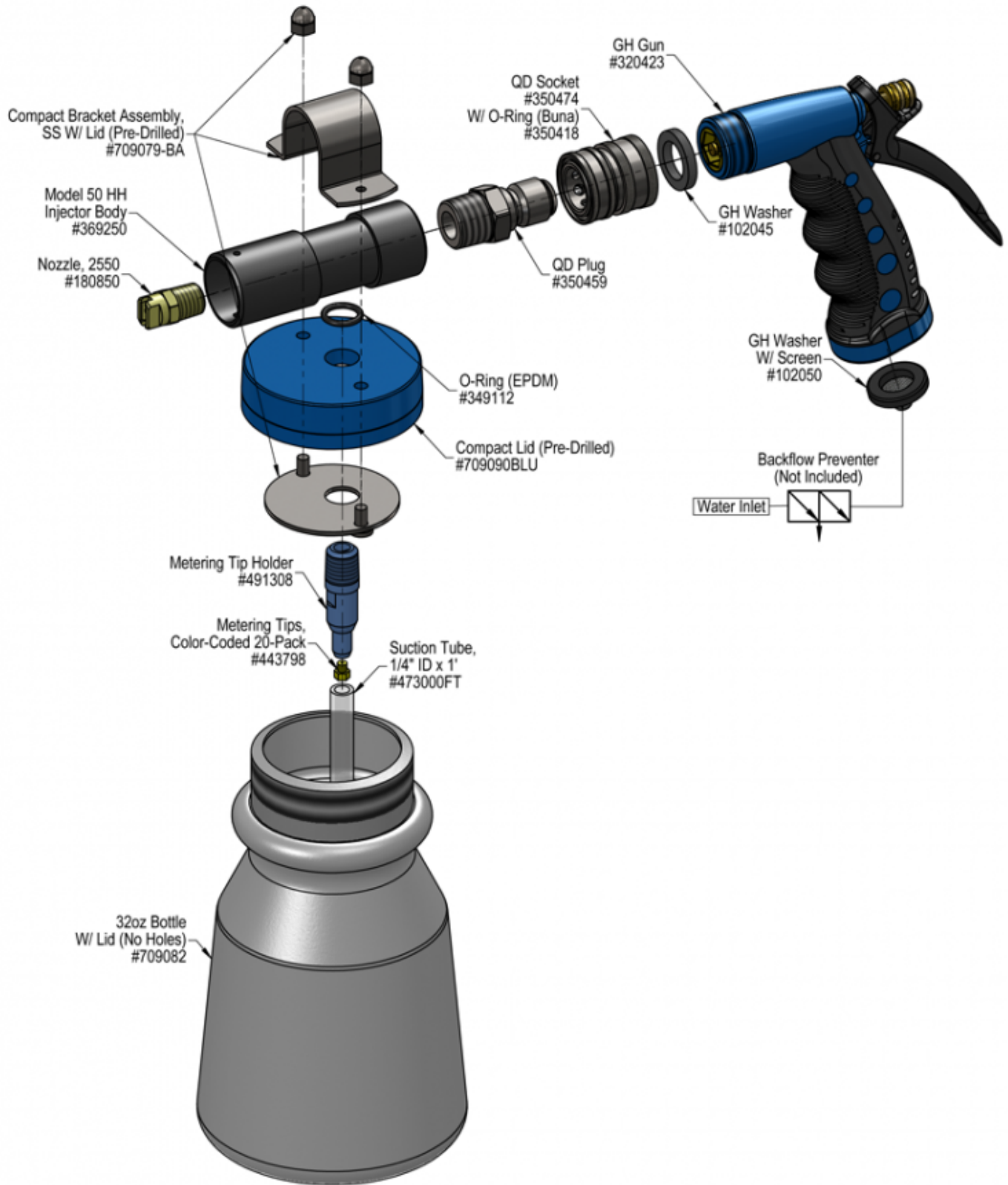
Metering Tip Color	Oz. per Min.	Example: Dilution Ratio @ 40 PSI
Brown	0.56	526:1
Clear	0.88	335:1
Bright Purple	1.38	213:1
White	2.15	137:1
Pink	2.93	100:1
Corn Yellow	3.84	77:1
Dark Green	4.88	60:1
Orange	5.77	51:1
Gray	6.01	49:1
Light Green	7.01	42:1
Med. Green	8.06	37:1
Clear Pink	9.43	31:1
Yellow Green	11.50	26:1
Burgandy	11.93	25:1
Pale Pink	13.87	21:1
Light Blue	15.14	19:1
Dark Purple	17.88	16:1
Navy Blue	25.36	12:1
Clear Aqua	28.60	10:1
Black	50.00	6:1
No Tip Ratio Up To:		5.0:1

The dilution ratios above are approximate values. Due to chemical viscosity, actual dilution ratios may vary.

Metering Tip Selection Formula
 $(\text{GPM} \times 128) / \text{Dilution Ratio} = \text{Oz per Min}$

Flow Rate Chart

Pressure	Flow Rate
PSI	GPM
40	2.30
50	2.57
60	2.82
70	3.04
80	3.25
90	3.45
100	3.64



Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Unit will not draw chemical	1, 4, 5, 6, 7	8, 9, 10, 11, 12, 13, 14
B) Dilution too weak	2, 4, 5	8, 9, 10, 11, 12, 13, 14
C) Dilution too strong	3	14
D) Water backing up into chemical container		8

Possible Cause / Solution	
Startup	Maintenance
<ol style="list-style-type: none"> 1. Inlet ball valve or trigger gun not completely open <ul style="list-style-type: none"> ◦ Completely open the inlet ball valve. 2. Not enough chemical - metering tip too small <ul style="list-style-type: none"> ◦ Install larger metering tip. 3. No metering tip installed or metering tip too large <ul style="list-style-type: none"> ◦ Install smaller metering tip. 4. Chemical tube not immersed in chemical or chemical depleted <ul style="list-style-type: none"> ◦ Immerse tube or replenish. 5. Discharge hose too long for available water pressure, kinked or wrong size <ul style="list-style-type: none"> ◦ Straighten the hose or replace hose. 6. Nozzle size too small (SEE REQUIREMENTS) 7. Water pressure or water volume too low/inlet piping too small causing poor chemical pick up <ul style="list-style-type: none"> ◦ Increase water pressure or water volume 	<ol style="list-style-type: none"> 8. Chemical check valve stuck or failed <ul style="list-style-type: none"> ◦ Clean or replace. 9. Chemical strainer or metering tip partially blocked <ul style="list-style-type: none"> ◦ Clean or replace chemical strainer and/or metering tip. 10. Chemical tube stretched out or pin hole/cut in chemical tube <ul style="list-style-type: none"> ◦ Cut off end of tube or replace tube. 11. Vacuum leak in chemical pick-up connections <ul style="list-style-type: none"> ◦ Tighten the connection. 12. Water strainer clogged or missing/injector inlet orifice clogged <ul style="list-style-type: none"> ◦ Clean or replace strainer; check/clean inlet orifice for obstructions. DO NOT DRILL OUT. 13. Hard water scale or chemical build-up may have formed in the injector body causing poor or no chemical pick-up <ul style="list-style-type: none"> ◦ Follow Preventive Maintenance instructions below, using hot water and/or de-scaling acid. When there is no draw at all, carefully remove fittings and soak entire injector body in de-scaling acid. 14. More than one chemical ball valve is open <ul style="list-style-type: none"> ◦ 2-Way and 3-Way models only

PREVENTIVE MAINTENANCE: When the unit will be out of service for extended periods, place chemical tube(s) in water and flush the chemical out of the unit to help prevent chemical from drying out and causing build-up. Periodically check and clean chemical strainer and replace if missing.

