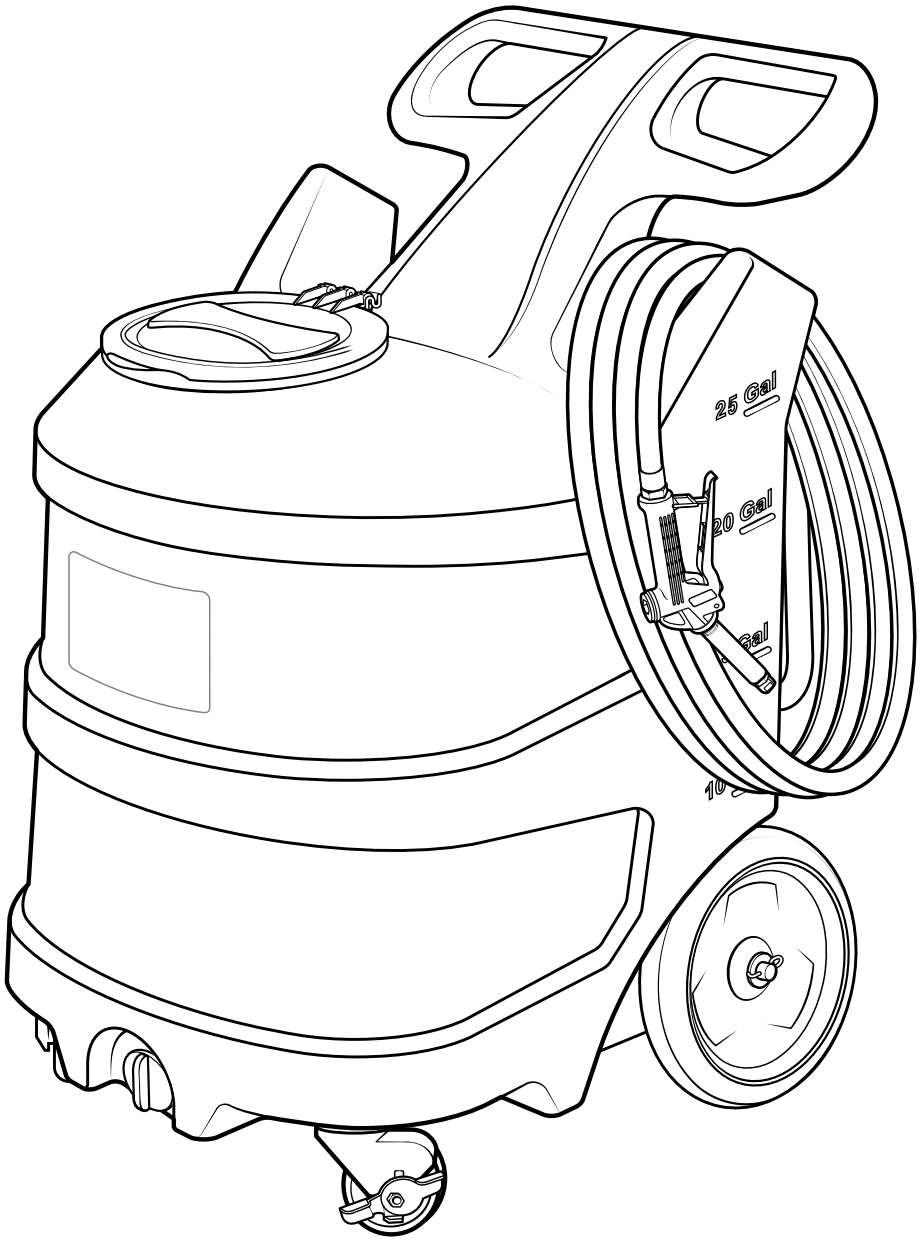
25 Gallon Spray Unit

Service Manual

SP-25N



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 appropriate personal protective equipment (PPE) may result in serious injury such as burns, rashes, eye, throat or lung damage and death. Always wear PPE as indicated in the Safety Data Sheet (SDS) 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 SDS associated with the chemical solution 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. Release any remaining air pressure from the unit. 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.

Never point the discharge wand at yourself, another person, or any object you do not want covered in chemical.

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 the 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.

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 modifying 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 pump 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 pressurized and connected to the air supply may result in serious injury or death. Always ensure that the unit has been depressurized and disconnected from the air supply before conducting any maintenance. Servicing or modifying 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 suction line and strainer for debris. 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 to the air fitting on the backplate. See Page **8** for more details. (Back plate assembly)

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	• Ensure proper chemical and concentration are being used. • Check to ensure discharge hose is uncoiled properly, and that there are no kinks that could obstruct fluid flow.
Air passes through the pump without cycling	• The pump needs to be replaced.
The unit operates at a reduced pressure	• Check 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 off the unit 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 air regulator.

Tank Assembly

Front view

TNKA-25N-BK:
25 gallon natural tank assembly - black* lid - includes drain plug, wheels, suction valve, and backplate thumb nuts

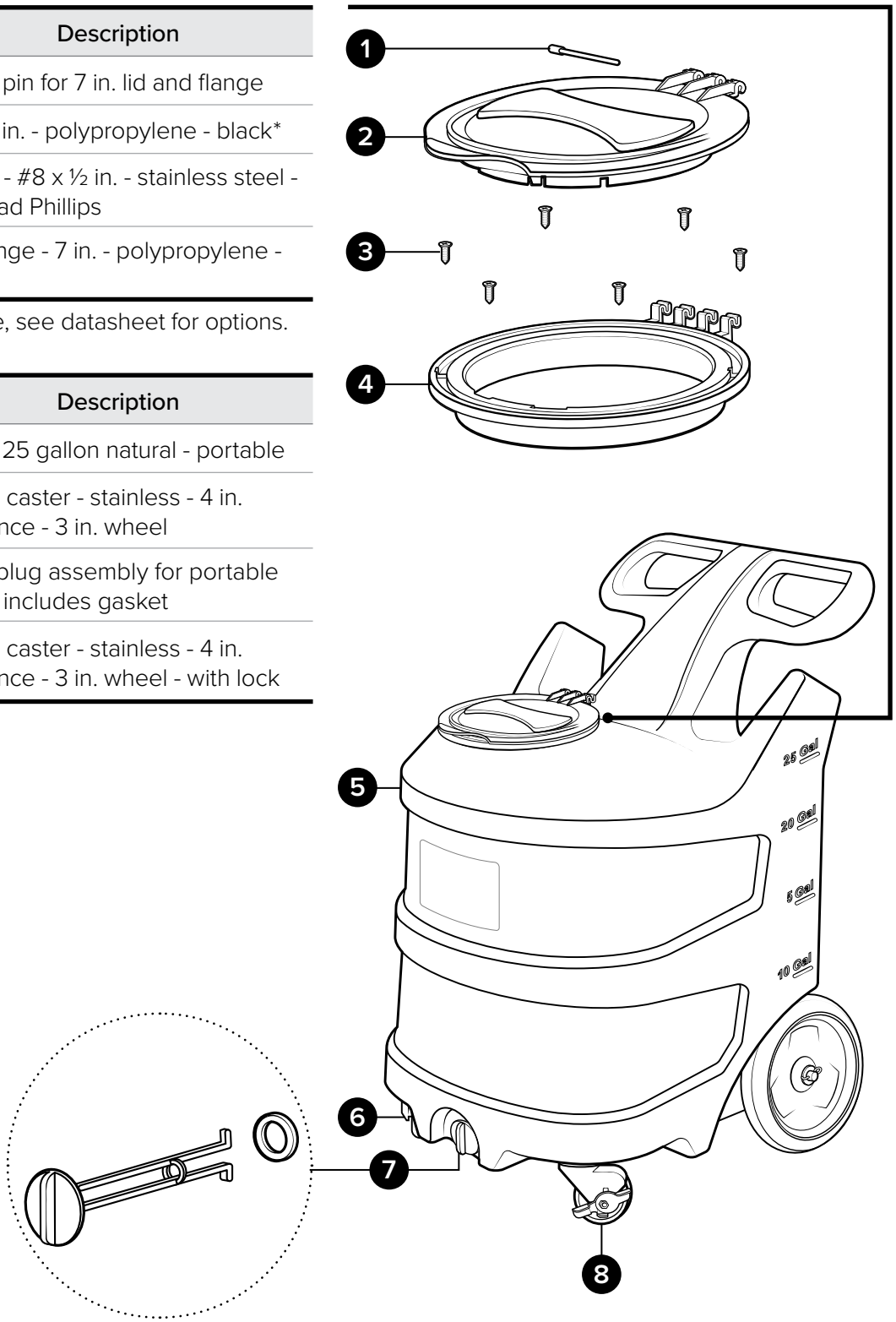
LDA-7BK:
Lid assembly - includes 7 in. black* lid, lid flange, hinge pin, and mounting screws

Item number		Description
1	LD-PIN	Hinge pin for 7 in. lid and flange
2	LD-7BK-LID	Lid - 7 in. - polypropylene - black*
3	S812-FH	Screw - #8 x ½ in. - stainless steel - flat head Phillips
4	LD-7BK-FLNG	Lid flange - 7 in. - polypropylene - black*

* Additional colors available, see datasheet for options.

Item number		Description
5	TNK-25N	Tank - 25 gallon natural - portable
6	CST3SS	Swivel caster - stainless - 4 in. clearance - 3 in. wheel
7	DPA	Drain plug assembly for portable units - includes gasket
8	CST3SS-L	Swivel caster - stainless - 4 in. clearance - 3 in. wheel - with lock

LDA-7BK



Tank Assembly

TNKA-25N-BK:
25 gallon natural tank assembly - black* lid - includes drain plug, wheels, suction valve, and backplate thumb nuts

BPTNA:
Back plate thumb nut assembly - includes bolt, thumb nut, and tether

Item number		Description
1	BST1420118-VS	Bolt - set - ¼-20 x 1⅛ in. - stainless steel - Vibra-Seal
2	TN1420	Thumb nut - ¼-20 x 1¼ in. - PP - brass insert - assembled with tether

VLVA-BVPVC34:
Suction valve assembly - includes ¾ in. PVC valve, bushing, ¾ in. hose barb elbow, and screw band clamp

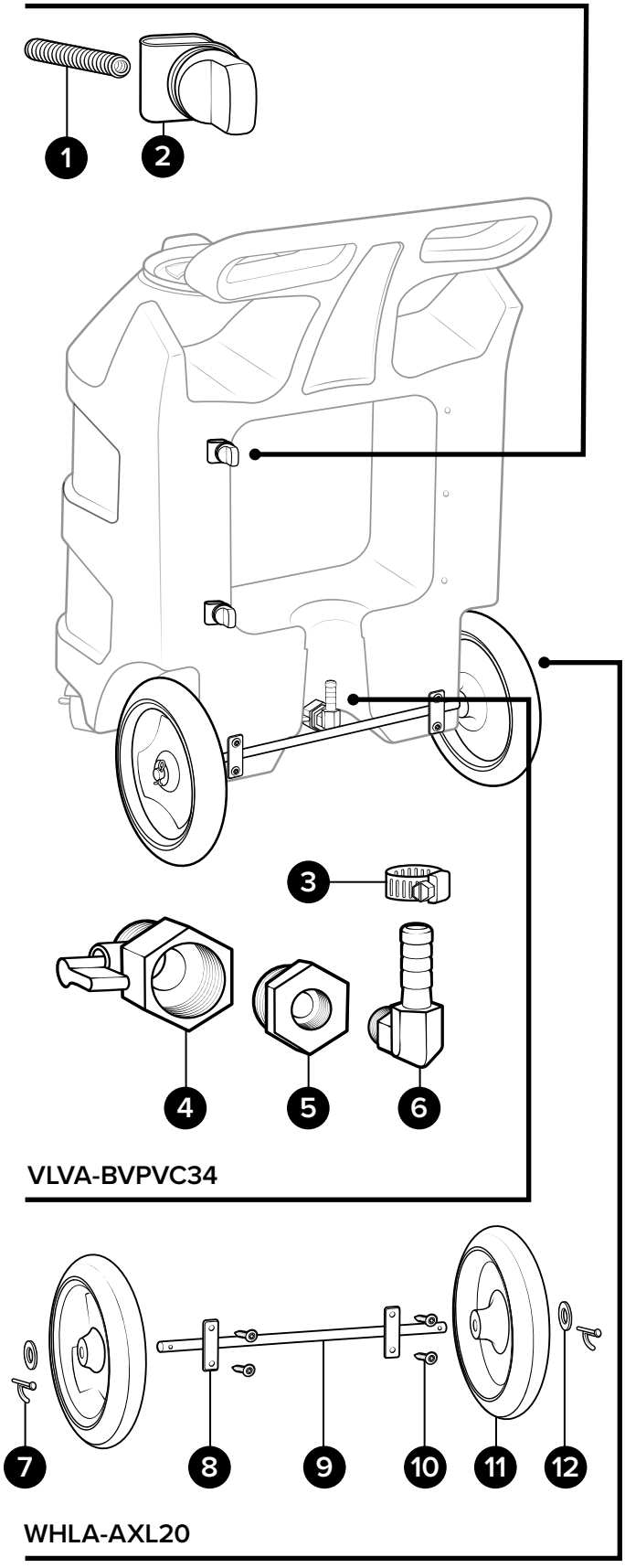
Item number		Description
3	SSC38	Screw band clamp - stainless steel - for ⅜ in. hose
4	BVPVC34MF	Ball valve - PVC - ¾ NPT to ¾ FNPT - Buna seal
5	HHPB3414	Hex head poly bushing ¾ MPT x ¼ FPT
6	HBSSEL1438	Hose barb - stainless steel - elbow - ¼ in. MPT x ⅜ in. barb

WHLA-AXL20:
10 in. wheel assembly - includes 20 in. axle, axle plate, bolts, washers, and cotter pins

Item number		Description
7	COT	Cotter pin - stainless steel - ⅛ in. dia x 1 in. long
8	PLSS-AXL	Axle plate - stainless steel - 2.5 in. x 1 in. - 2 holes
9	AXL20	Axle - stainless - 0.625 dia x 20.5 in.
10	B142012-VS	Bolt - ¼-20 x ½ in. - stainless steel - truss head Phillips - Vibra-Seal
11	W10	Wheel - 10 in. - non-marking
12	FW58	Flat washer for ⅝ in. od pipe or axle - stainless steel - 0.64 in. id x 1.2 in. od x 0.05 in. thk

Back view

BPTNA



VLVA-BVPVC34

WHLA-AXL20

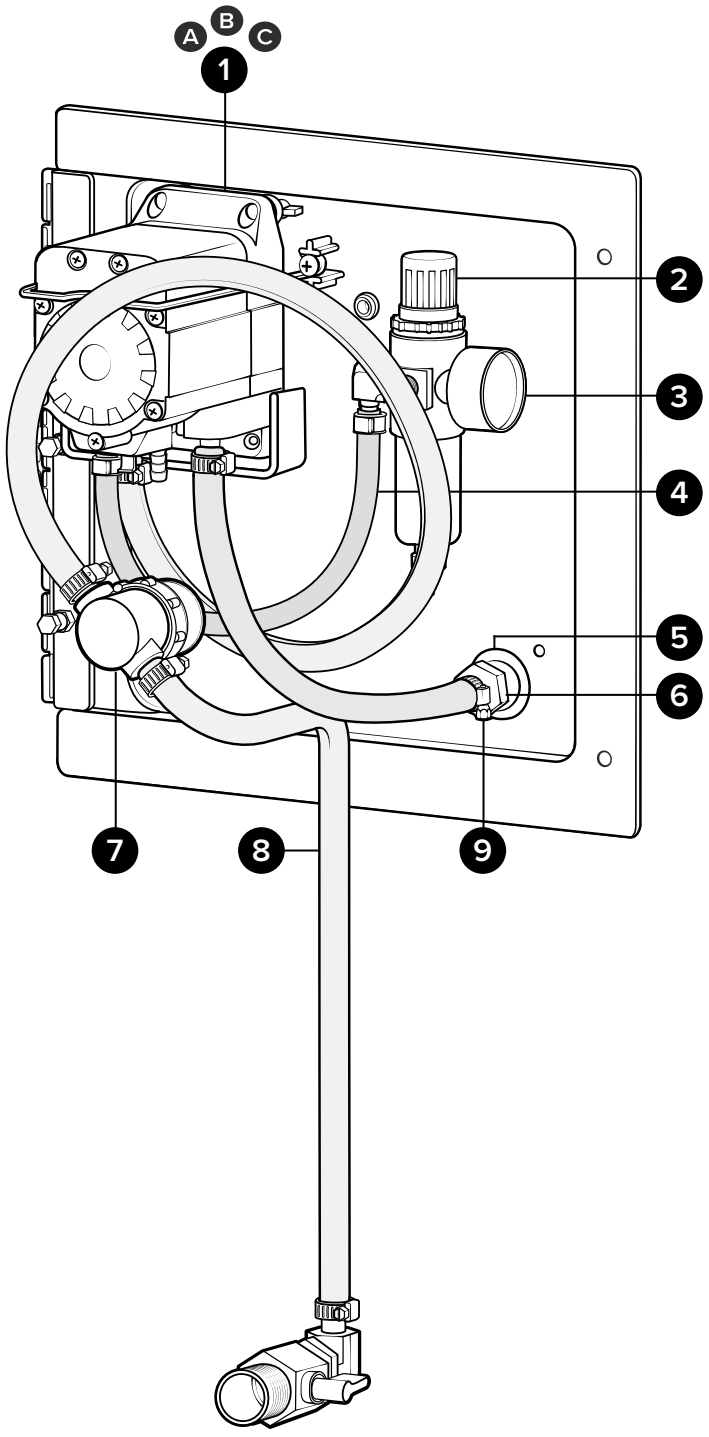
Back Plate Assembly

Inside view

PA-SP38:
Plate assembly for portable spray and gel units with ⅜ in. hose - Santoprene pump

Additional plate assembly pump options:
PA-SP38K: Kalrez pump
PA-SP38V: Viton pump

Item number		Description
1	**A** P56	Pump with Santoprene seals - includes hose barbs, air fitting, and exhaust barb
	B P56K	Pump with Kalrez seals - includes hose barbs, air fitting, and exhaust barb
	C P56V	Pump with Viton seals - includes hose barbs, air fitting, and exhaust barb
2	R25	Air regulator - two ¼ in. FPT ports - two ⅛ in. FPT ports - includes filter and bowl
3	AG100	Air gauge - ⅛ in. NPT - 100 PSI dry model
4	H14BL-F	¼ in. blue hose - hybrid TPE - available per ft.
5	FW12NPT	Flat washer for ½ in. NPT - stainless - 0.88 in. id x 1.5 in od x 0.05 in. thk
6	HBFSS1238	Stainless steel hose barb ½ FPT x ⅜ barb
7	STR38-IL	In-line strainer - ⅜ barb - EPDM gasket - 20 mesh SS - black bowl
8	H38BL-F	⅜ in. id blue hose - hybrid TPE - available per ft.
9	SSC38	t



Back Plate Assembly

PA-SP38:
Plate assembly for portable spray and gel units with ⅜ in. hose - Santoprene pump

Additional plate assembly pump options:
PA-SP38K: Kalrez pump
PA-SP38V: Viton pump

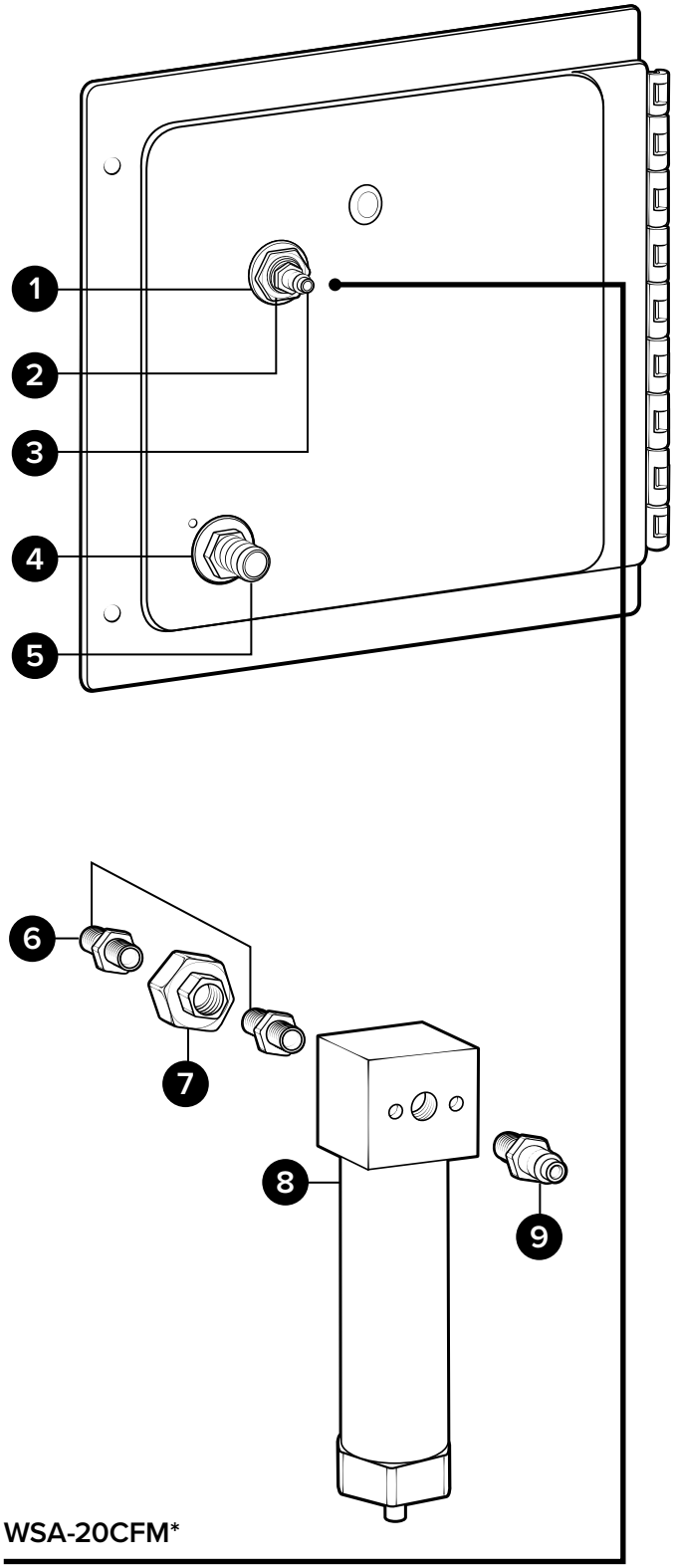
Item number		Description
1	SSSFN12	Serrated flange nut - stainless - ½ in.
2	SSA14BKH	Bulkhead adapter - stainless steel - ¼ in. NPT x ¼ in. NPSM
3	AP14	Air fitting ¼ MPT x plug - nickel-plated brass
4	FW12NPT	Flat washer for ½ in. NPT - stainless - 0.88 in. id x 1.5 in. od x 0.05 in. thk
5	HBSS1238	Stainless hose barb ½ MPT x ⅜ barb

Optional Components

WSA-20CFM:
Water separator assembly - 20 CFM - ¼ in. FPT ports - includes air plug and union fittings

Item number		Description
6	SN1414	Stainless hex nipple ¼ MPT x ¼ MPT
7	SSU14	Stainless steel union - ¼ in. FPT
8	WS-20CFM	Tsunami water separator/air dryer - 20 CFM - ¼ in. FPT ports
9	AP14	Air fitting ¼ MPT x plug - nickel-plated brass

Back view



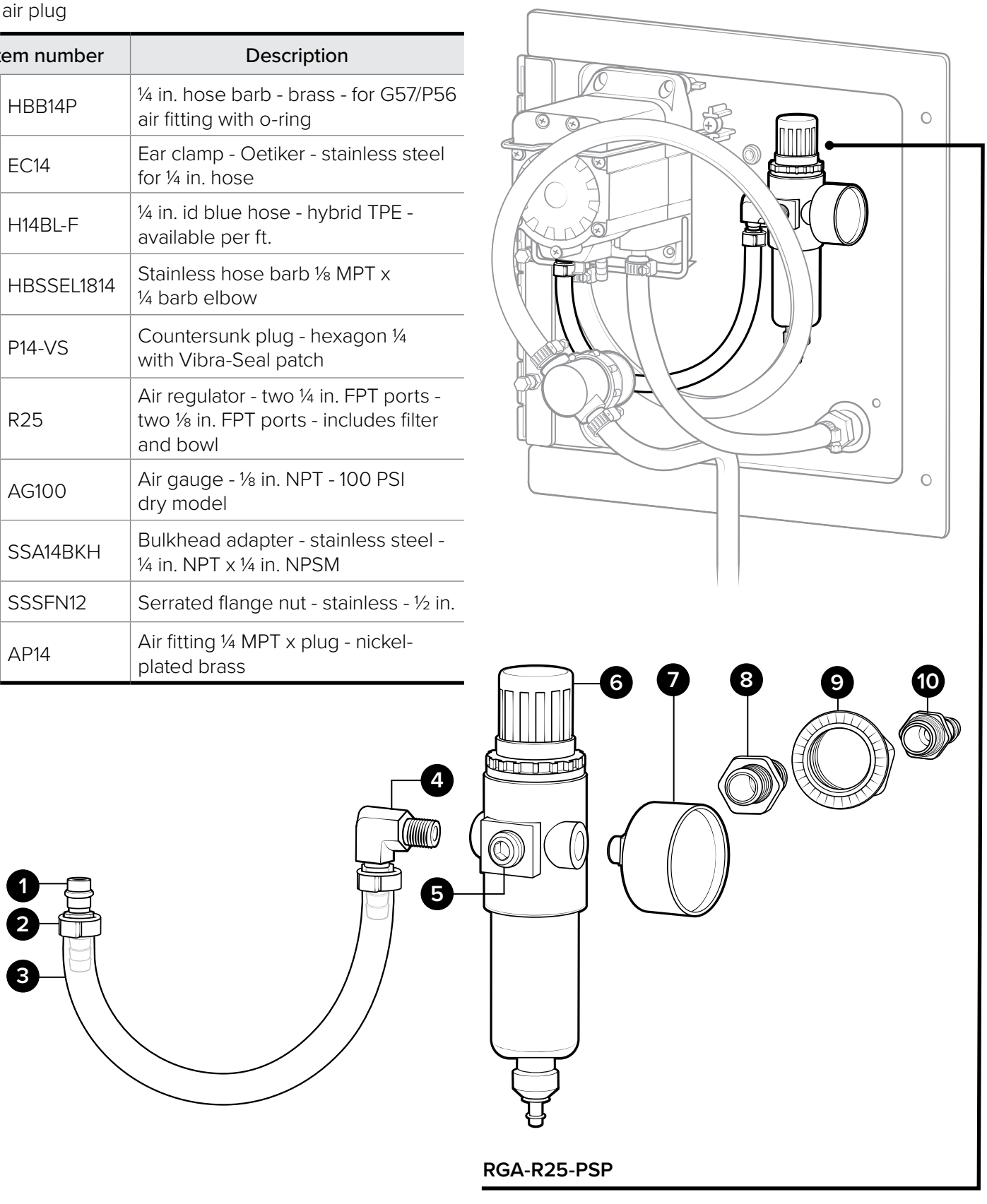
WSA-20CFM*

**Optional assembly sold separately*

Back Plate Sub-assemblies

RGA-R25-PSP:
Air regulator assembly for portable spray and gel units - includes air gauge, pump barb, hose, bulkhead fittings, and air plug

Item number		Description
1	HBB14P	¼ in. hose barb - brass - for G57/P56 air fitting with o-ring
2	EC14	Ear clamp - Oetiker - stainless steel for ¼ in. hose
3	H14BL-F	¼ in. id blue hose - hybrid TPE - available per ft.
4	HBSSEL1814	Stainless hose barb ⅛ MPT x ¼ barb elbow
5	P14-VS	Countersunk plug - hexagon ¼ with Vibra-Seal patch
6	R25	Air regulator - two ¼ in. FPT ports - two ⅛ in. FPT ports - includes filter and bowl
7	AG100	Air gauge - ⅛ in. NPT - 100 PSI dry model
8	SSA14BKH	Bulkhead adapter - stainless steel - ¼ in. NPT x ¼ in. NPSM
9	SSSFN12	Serrated flange nut - stainless - ½ in.
10	AP14	Air fitting ¼ MPT x plug - nickel-plated brass



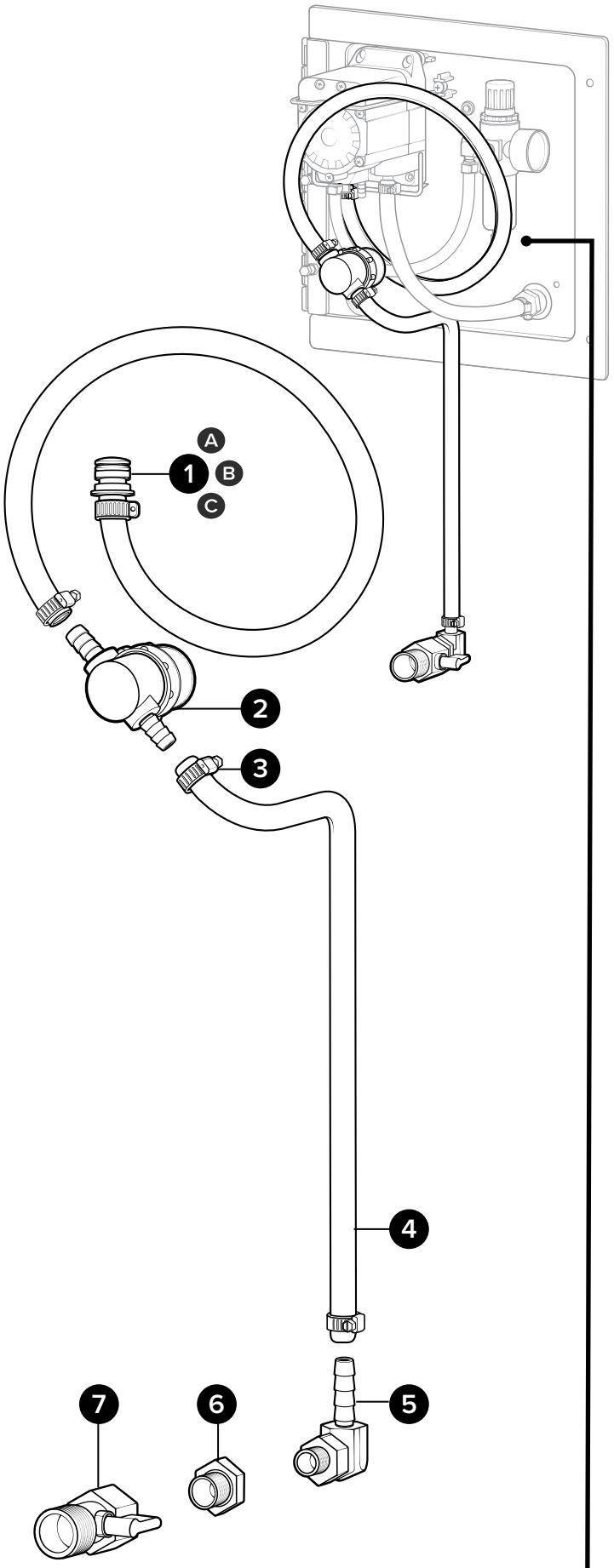
RGA-R25-PSP

Suction Assembly

SCTNA-PF:
Suction assembly for portable spray and gel units - includes suction valve, hose, in-line strainer, and pump hose barb - for Santoprene pump

Additional suction assembly options:
SCTNA-PFK: Portables with Kalrez pump
SCTNA-PFV: Portables with Viton pump

Item number		Description
1	**A** HB5638	Hose barb for P56 pump - EPDM o-ring
	B HB5638K	Hose barb for P56K pump - Kalrez o-ring
	C HB5638V	Hose barb for P56V pump - Viton o-ring
2	STR38-IL	In-line strainer - ⅜ barb - EPDM gasket - 20 mesh SS - black bowl
3	SSC38	Screw band clamp - stainless steel - for ⅜ in. hose
4	H38BL-F	⅜ in. id blue hose - hybrid TPE - available per ft.
5	HBSSEL1438	Stainless hose barb ¼ MPT x ⅜ barb elbow
6	HHPB3414	Hex head poly bushing ¾ MPT x ¼ FPT
7	BVPVC34MF	Ball valve - PVC - ¾ NPT to ¾ FNPT EPDM seal



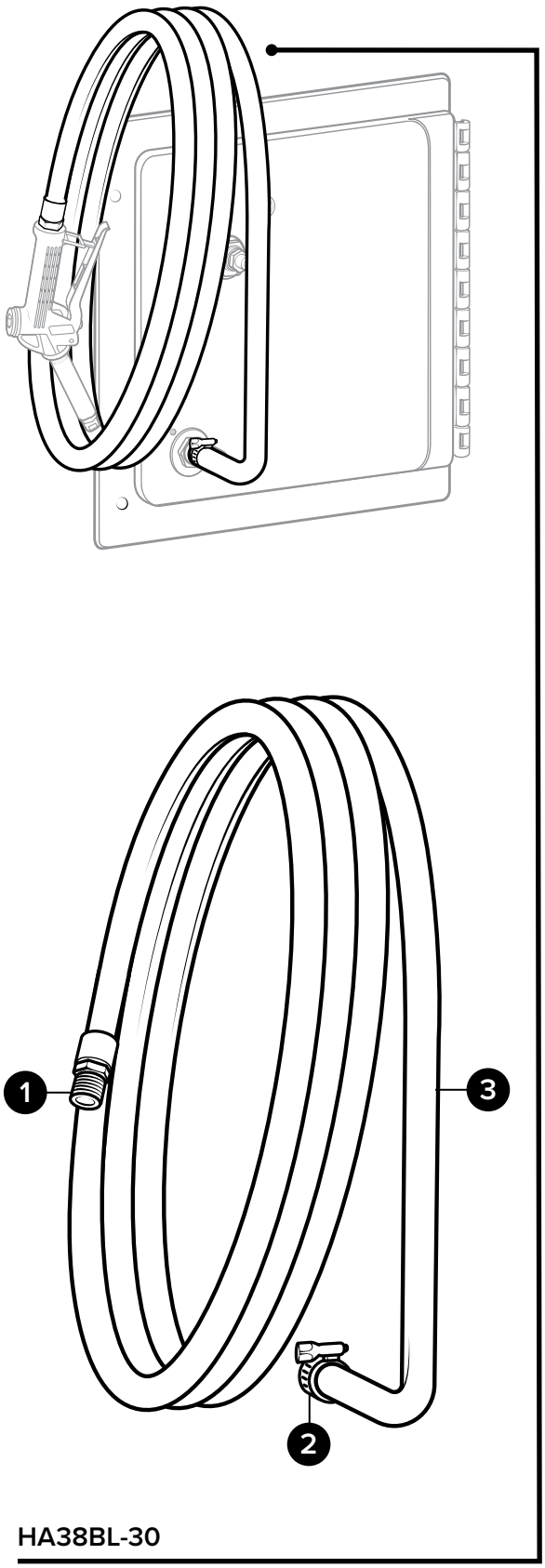
SCTNA-PF

Hose Assembly

HA38BL-30:
Hose assembly - 30 ft. of ⅜ in. blue* hose - includes ferruled hose barb

Item number		Description
1	HBSS1238	Stainless hose barb ½ MPT x ⅜ barb
2	SSC38	Screw band clamp - stainless steel - for ⅜ in. hose
3	H38BL-F	⅜ in. blue* hose - hybrid TPE - available per ft.

* Additional colors available, see datasheet for options.

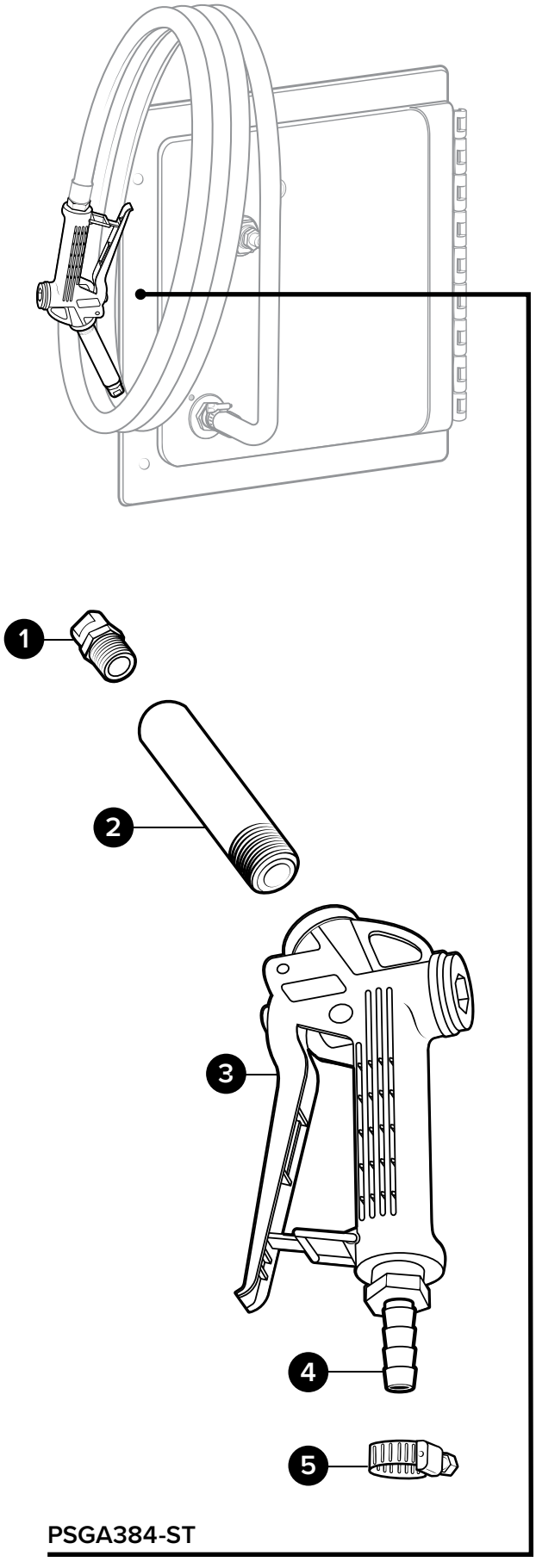


HA38BL-30

Wand Assembly

PSGA384-ST:
Poly spray gun assembly for ⅜ in. hose - includes 4 in. black poly wand, ST2520SS spray tip, hose barb, and screw band clamp

Item number		Description
1	ST2520SS	Spray tip - 25 degree fan - 2.0 GPM - stainless - ¼ MPT
2	PW12M14F4	½ in. NPT and ¼ in. FNPT wand - black UHMW - 4 in. long
3	PSG12	Poly spray gun with 2x ½ in. straight thread - gray handle with red clip - 316SS internal spring - includes 2x o-ring
4	HBSS1238	Stainless hose barb ½ MPT x ⅜ barb
5	SSC38	Screw band clamp - stainless steel - for ⅜ in. hose



PSGA384-ST