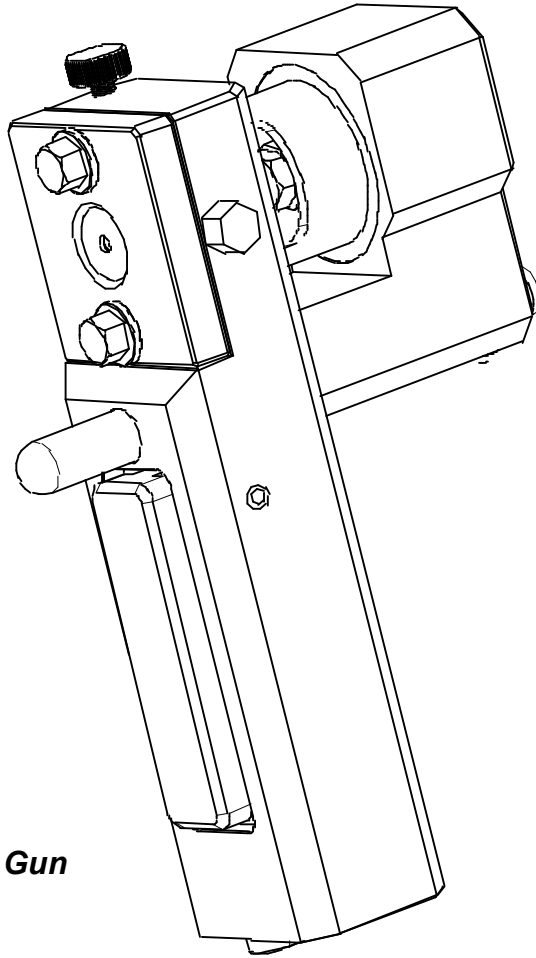


PENTECH, INC.

**Operating Manual – Parts Manual
July, 2008
Issue 4**



***Plural Component
Impingement Mixing
Mechanical Purge Spray Gun***

Palm Spray Gun

***Pentech, Inc.
7256 21st Street East
Sarasota, FL 34243***

***Phone: 941-739-2700
Fax: 941-739-2722
www.pentech.us***

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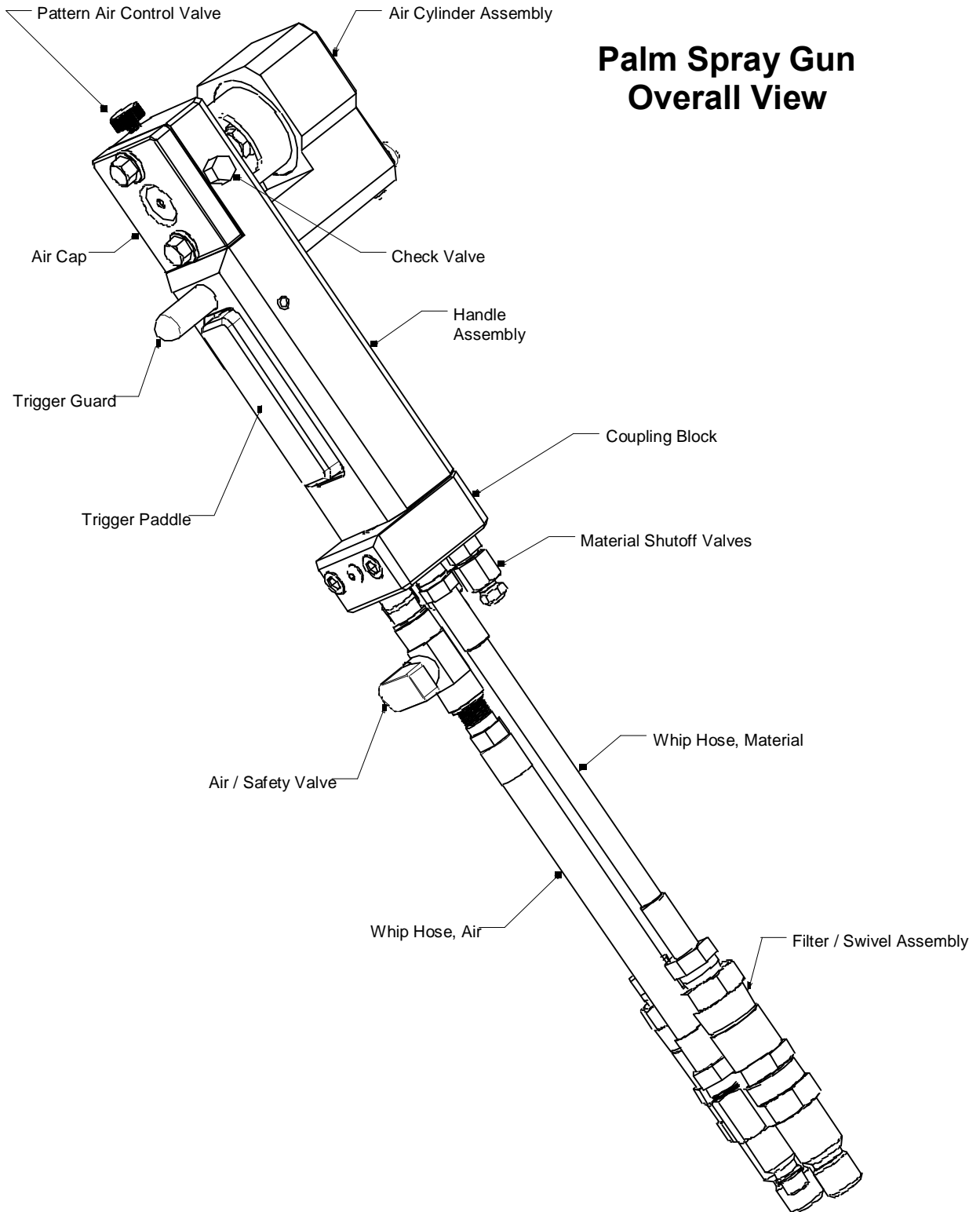
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Palm Spray Gun Technical Details

Maximum Fluid Working Pressure	3500 psi
Minimum Air Inlet Pressure	100 psi
Maximum Air Inlet Pressure	130 psi
Minimum Material Output	1lb. / min.
Maximum Material Output	6 lbs. / min.
Maximum Fluid Temperature	200 F.
Air Inlet Size	¼+npt, Quick Disconnect Nipple
A Component (ISO) Inlet Size	
B Component (POLY) Inlet Size	
Dimensions:	Height . 6+
	Width . 2+
	Length . 3 ½+
Weight	1.74 lbs.
Wetted Parts	Aluminum, Stainless Steel, Carbon Steel, Teflon, Chemically Resistant Plastic and O-Rings
Plural Component	
Air Operated	
Impingement Mixing	
Mechanical Purge	



The Palm Spray Gun Package Includes

PSG1003	Palm Spray Gun Package
Includes:	
PSG2100	Palm Gun Complete
PSG5300	Coupling Block / Whip Hose Assembly, 3 Ft.
PSG9000	Tool Kit
Includes:	1 PSG9009 Nut Driver, 5/16
	1 PSG9010 Combination Wrench
	1 PSG9011 Pin Vise, Small
	1 PSG9015 Drill Index, #61-#80
	1 PSG9012 Drill Bit, 7/64+x 6+
	1 PSG9014 Drill Bit, .149
PSG100	Manual, Operating and Parts Identification

Note: Palm Gun Package comes ready to spray with:
PSG9001-13 (.013 Round Pattern Mix Module)
PSG9004-24 (.024 Round Pattern Pattern Control Disc)

Optional Items

PSG8000-A	Flush Tank Assembly (Recommended)
PSG7017	Adapter Fitting Assembly, (To Graco Hoses)
PSG7016	Adapter Fitting Assembly, (To Glascraft Hoses)
BD6000	Adapter Block Assembly, (To Gusmer Style Coupling Block)
BD6100	Adapter Block Assembly, (To Graco Style Coupling Block)
BD6200	Adapter Block Assembly, (To Glascraft Style Coupling Block)

Safety Information & Warnings

Before operating the Palm Gun, personnel should fully understand the contents, recommendations, and safety notes contained in this manual.

Failure to follow these guidelines may result in severe bodily injury or damage to equipment and property.

The safety guidelines outlined in this manual are not intended to be all inclusive. A certain degree of knowledge of general industrial safety practices as used in the spray applied coatings and foam industry are required to insure operator safety.

Aluminum Parts Hazard

Do not use 1,1,1. trichloroethane, methylene chloride, or other halogenated hydrocarbon solvents, or fluids containing these solvents in the Palm Gun. These solvents are capable of causing a serious chemical reaction, and possible rupture when used in pressurized aluminum equipment.

Personal Protection

The operator and personnel in the vicinity of this equipment must ensure their personal safety by wearing:

- Protective eye wear
- Protective clothing and gloves
- Protective breathing apparatus, supplied fresh air system, or approved respirator.

Injection Hazard:

This equipment operates at high fluid pressure and is capable of injecting chemicals into skin.

- Do not place hands or fingers in area of spray pattern.
- Never point spray gun in the direction of other personnel.
- Close material supply valves before leaving spray gun unattended.
- Relieve all pressure before servicing or cleaning this equipment.
- If chemicals have pierced skin, seek immediate medical attention.

Chemical Materials and Fumes:

- Read and understand Material Safety Data Sheet (MSDS) provided by chemical manufacturer.
- Store and dispose of waste chemicals in accordance with manufacturers guidelines.

GENERAL OPERATION OVERVIEW

Gun Safety Devices:

The Palm Gun has three methods of putting the gun in the safe mode.

1. Air Safety Valve:

The gun will not trigger without air pressure to the air cylinder. To engage the air safety valve, turn handle counterclockwise to off position. The air valve will vent air pressure contained in the gun handle and air cylinder.

2. Material Shut off Valves:

The gun will not dispense material with the A & B manual valves closed. To engage manual valve safety, turn manual valves clockwise until closed.

3. Emergency Shut Off Button:

Located at the rear of the air cylinder. If air pressure to the gun is lost, this button can be pushed in to stop material flow through the gun.

Hose Orientation:

With gun pointing away from operator, A component hose and manual valve is on operators left. B component hose and manual valve is on operators right.

Air Hose connection:

Insure that air safety valve is in the closed, / safe position. Air hose is connected by inserting male quick disconnect fitting located at end of whip hose into female quick disconnect air fitting located in heated hose bundle. When gun is not in use, keep air fittings free of dirt and debris.

Coupling Block:

The A & B material hoses, air hose / coupling block are connected to the gun handle by the coupling block bolt. Ensure that the sealing o-rings are in place for the A & B material and air passage. Before attaching the coupling block to handle, open the air valve to blow out any dirt or debris that may be in air line.

Material Shut Off Valves:

The A & B material shut off valves control the on/off flow of material to the gun. Do not open a manual valve unless the gun is connected, or, the coupling block material ports are directed into a suitable container.

Theory of Operation

Pushing Trigger:

When the gun is triggered, air is directed by the trigger spool valve to the air cylinder. This moves the valving rod rearward from the PCD, past the A and B ports. This allows material to flow through the A and B ports in the mix module. As A and B material enters the center of the mix module, the two streams impinge with each other at high pressure and velocity and start the mixing action. They then travel forward and exit through the pattern control disc (PCD / Spray Tip) and form the spray pattern.

Releasing Trigger:

When the trigger is released, the trigger spool valve directs air to the air cylinder which pushes the valving rod forward. This closes the A and B ports in the mix module, and pushes the remaining mixed material in the center of the module out through the PCD. The valving rod stops its forward travel by contacting the rear of the PCD. At this point, all mixed material is cleared from the mix module, PCD, and the gun is ready to be triggered again.

Orientation of Mix Module Orifices

Round Pattern

The A and B orifices in the **round pattern** module are offset to each other. This offset imparts rotation to the A & B material streams in the center of the module, which along with the round orifice in the PCD, results in a round spray pattern.

See Page 14

Fan Pattern

The A & B orifices in the **fan pattern** module are in line with each other as no rotation of the A & B material streams is required for the fan pattern PCD.

See Page 15

Pressure Balance

Due to the low output capabilities of the Palm Gun, it is important to properly size the A and B material orifices in the mix module. The chart on **page 16** can serve as a guide.

Many conditions can affect the A & B pressure balance.

1. Material viscosity difference of A & B components.
2. Material temperature,
3. Spray pressure.
4. Filter cleanliness.
5. Mix module orifice size.

When starting up the Palm Gun, the A & B mix module orifices should be drilled out to the same size.

When spraying, the A & B gauges will be indicating back pressure caused by any restrictions, (A & B orifice size, filters, viscosity, etc.)

The gauges may, or may not read exactly equal. This is normal.

Providing the proportioner is being supplied with an adequate amount of material, free of air bubbles, the ratio of A to B will be correct.

A pressure difference at the gauges does not mean the gun is spraying off ratio.

Depending on the conditions listed above, a pressure difference between the A & B pressure gauges may be seen. Gauge readings of 500 -700 psi pressure difference will still yield a good mix. Always test spray material to check for proper mixing action and cure.

If further balancing of the pressures is desired, the orifice corresponding to the higher reading gauge may be **very carefully enlarged** with the next larger size drill bit. The module ports can also be enlarged equally to account for uneven orifice wear.

Important Tips for Operation

Air cap and mating front face of gun must be very clean and free of nicks to insure a good seal. No gasket is used here.

Air cap bolts must be tightened with a wrench until tight.

Consult your material supplier for the proper cleaning and flushing solvent to use. Ensure that cleaning solvents do not cause swelling of o-rings.

Do not soak o-rings or mix module in solvent. Solvent may be used for cleaning, and then dried off.

Air flow to air cap should remain on whenever material shut off valves are open. Misting in air pattern indicates a leak at the module seat area. Tighten air cap bolts snugly.

Do not submerge the entire gun in cleaning solvent as damage to the trigger spool valve o-rings will result.

Lubricate air line inlet daily, 2-3 drops of air tool oil only.

Apply a light coat of wax or grease to exterior of gun daily to prevent overspray build up.

Use only the proper sized drills for sizing module ports, or cleaning the PCD orifice.

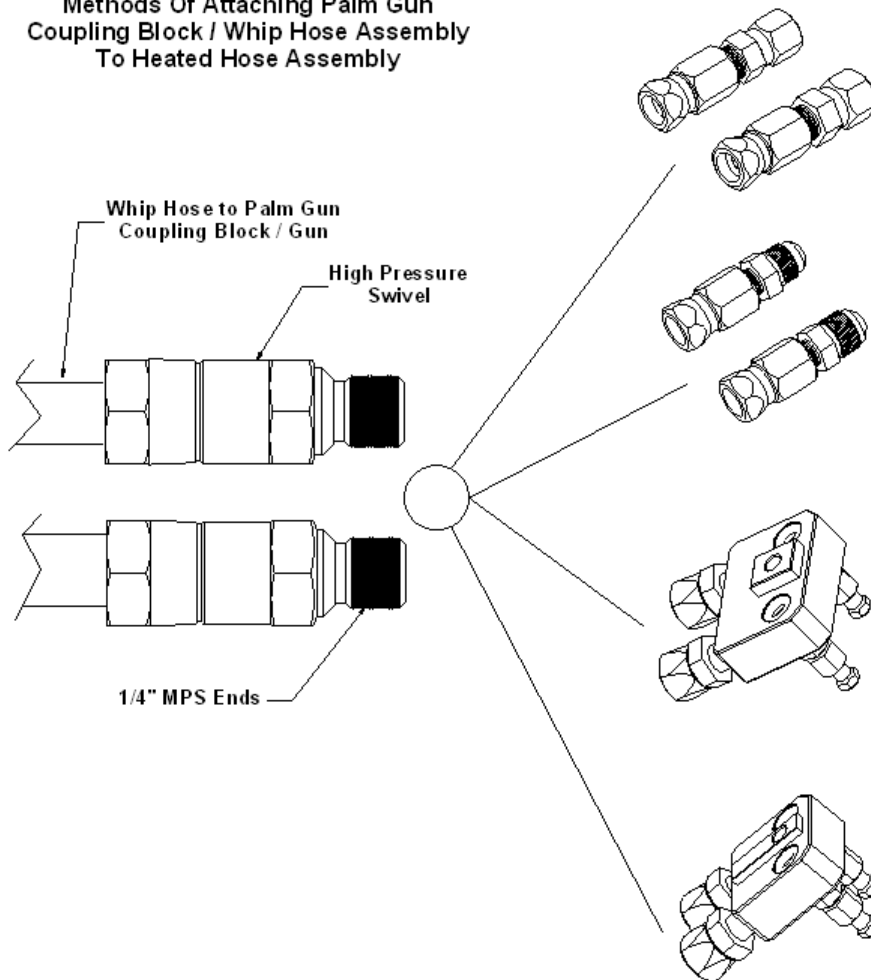
Attaching the Palm Gun To The Heated Hose Assembly

Determine whether the Palm Gun whip hoses will be connected directly to the standard 10 Ft. heated whip hose assembly with adapter fittings, or if an adapter block will be used.

See pages 10 & 11

The use of the adapter block permits the Palm Gun and whip hose assembly to be removed quickly from a standard coupling block. This feature allows the applicator to switch between different types of guns, depending on the jobs requirements. The palm gun and its coupling block / whip hose assembly can be removed, set aside, and remain totally sealed until its next use.

**Methods Of Attaching Palm Gun
Coupling Block / Whip Hose Assembly
To Heated Hose Assembly**



**Attach To Graco / Gusmer Heated Hose Ends
Hose Adapter Fitting Assembly, Graco / Gusmer
Part # PSG7017
1 Set, A & B**

**Attach To Glascraft Heated Hose Ends
Hose Adapter Fitting Assembly, Glascraft
Part # BD7016
1 Set, A & B**

**Attach To Graco Style Coupling Block
Adapter Block Assembly, Graco
Part # BD6100**

**Attach To Gusmer Style Coupling Block
Adapter Block Ass embly, Gusmer
Part # BD6000**

Initial Gun Start Up

Install Coupling Block / Whip Hose Assembly to Heated Hose Set:

1. Attach Coupling Block / Whip Hose Assembly to existing heated hose bundle using either adapter fittings, or adapter blocks. See page 9. Check to see that A & B material shut off valves are closed.
2. Turn on hose heat and machine heaters. Set temperature, and allow machine to reach spray temperature.
3. Pressurize equipment, bleed air from coupling block / whip hose assembly into suitable waste container. Equalize A & B component pressure gauges at correct spray pressure.

Assemble Palm Spray Gun:

1. Remove air cap, PCD, and mix module. Check ports in mix module with proper size drill bit. **See page 5 and 14.** Replace mix module being careful to align pin in slot around module seat. Replace PCD, and air cap. Tighten bolts securely with wrench.
2. Check to see that basket filters are in place. Check to see that A & B material, and air o-rings are in place.
3. Apply a light coat of grease or wax to gun to prevent overspray from sticking.
4. Plug in air supply whip hose. Briefly open air safety valve to ensure air line is free of debris.
5. Attach gun to coupling block using 5/16+nut driver.
6. Open air / safety valve at bottom of gun.
7. Open pattern air valve $\frac{1}{4}$ to $\frac{1}{2}$ turn.
8. Slowly open A & B material shut off valves $1 \frac{1}{2}$ turns. Check for material mist in pattern or material leakage at air cap.

Gun is now ready to spray.

Aim off target, spray off target until good pattern develops.

Normal Gun Start Up

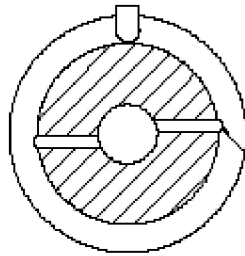
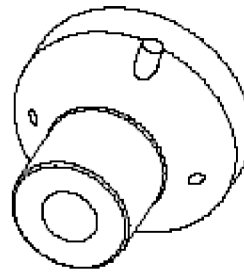
Assemble Palm Gun:

1. With air cap, PCD, and mix module removed, use flush tank or solvent squeeze bottle to insure that basket filter ports and ports to mix module seat are clean and open. A drill of the proper diameter can be used to clear build-up that may be present.
2. Check ports in mix module to ensure they are clean and properly sized. **See page 14** for details on drilling the mix module.
3. Apply a very light coating of lithium grease to the module seat and exterior of the mix module.
4. Push small end of module over the end of the valving rod. Carefully align module locating pin with groove in module seat ring. Push module fully into seat area. Re-check alignment of locating pin in slot.
5. Check to see that the orifice in the PCD is clean. Orifice may be carefully cleaned with proper drill size. **See page 14**. Apply a light coat of grease to PCD. Put PCD into place over large end of mix module.
6. Line up slot in rear of air cap with air port in mating gun face. Apply a light coat of grease to bolts and tighten until very snug with wrench. Apply light coat of grease to air cap to prevent overspray build-up.
7. Plug in air supply whip hose, open air / safety valve at bottom of gun.
8. Open pattern air valve $\frac{1}{4}$ to $\frac{1}{2}$ turn. Trigger gun to check for proper operation.
9. Slowly open A & B material shut off valves $1 \frac{1}{2}$ turns. Check for mist in pattern, or leakage around air cap.
10. Check for leakage at rear seal packing nut. Nut should be only tight enough to prevent leakage. Do not over tighten.

Gun is now ready to spray.

Aim off target, spray off target until a good pattern develops.

Palm Gun Mix Module Round Spray Patrn



Cutaway View
A - A

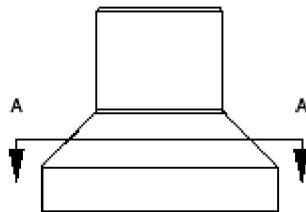
Only Drill Orifices
To Center Of Module.
Do Not Drill completely
Thru Module.

Alignment Pin
Must be lined up with slot
in module seat ring.

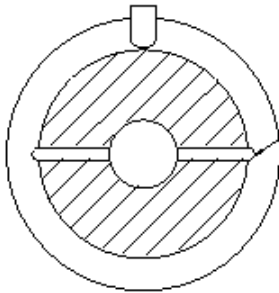
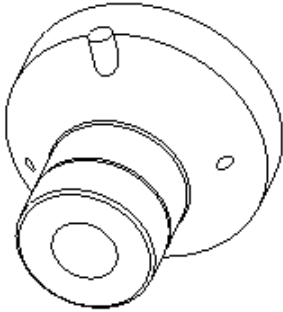
A Port
(ISO)

B Port
(Poly)

View From
Small End of Module



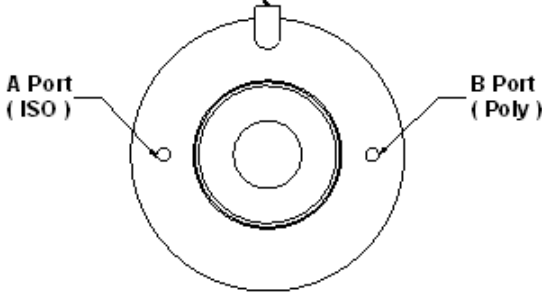
Palm Gun Mix Module Flat Spray Pattern



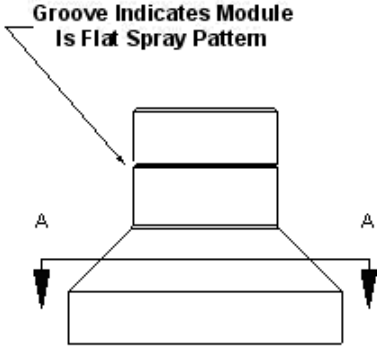
Orifices May Be Drilled
Straight Thru

Cut Away View
A - A

Alignment Pin
Must Be Lined Up With Slot
In Module Seat Ring.



View From
Small End of Module



Groove Indicates Module
Is Flat Spray Pattern

Module / PCD Chart

ROUND SPRAY PATTERN					
	PART		APPROX. OUTPUT	CLEAN OUT DRILL	
ITEM #	NUMBER	DESCRIPTION	PATTERN AT 24"	DRILL #	DRILL SIZE
8	PSG9001-13	Module, Mix, Round Pattern	1.25 - 2 Lbs./Min.	80	.0135
9	PSG9003-20	PCD, Round Pattern, .020	4" - 6"	76	.020
8	PSG9001-13	Module, Mix, Round Pattern	1.5 - 2.5 Lbs./Min.	80	.0135
9	PSG9004-24	PCD, Round Pattern, .024	6" - 10"	73	.024
8	See Note Below	Module, Mix, Round Pattern	2.5 - 4 Lbs./Min.	76	.020
9	PSG9020-28	PCD, Round Pattern, .028	8" - 12"	70	.028
8	See Note Below	Module, Mix, Round Pattern	4 - 6 Lbs./Min.	70	.028
9	PSG9021-36	PCD, Round Pattern, .036	10" - 12"	64	.036

Note:

Module is Part # PSG9001-13 Drilled by customer to size shown.

FAN SPRAY PATTERN					
	PART		APPROX. OUTPUT	CLEAN OUT DRILL	
ITEM #	NUMBER	DESCRIPTION	PATTERN AT 24"	DRILL #	DRILL SIZE
8	PSG9002-13	Module, Mix, Fan Pattern	1.25 - 2 Lbs./Min.	80	0.0135
9	PSG9005	PCD, Fan Pattern,	6" - 7"	Do Not Drill	
9	PSG9006	PCD, Fan Pattern,	7" - 8"	Do Not Drill	

Flow rates and pattern width is approximate, and will vary depending on material viscosity, temperature, and pressure.

Spraying and Normal Operation

Note: The Palm Gun comes standard with 3 ft. unheated whip hoses. Their purpose is to limit operator fatigue by providing more flexibility, as well as saving the wear and tear on the more expensive heated whip hose assembly.

Due to the small amount of unheated material in the whip hoses, it may take a moment for the heated material to reach the gun and the spray pattern to fully develop. Subsequent triggering will yield a good pattern instantly.

Start by spraying off target to check spray pattern.

Position the spray gun perpendicular to work surface whenever possible.

Overlap passes of the round pattern by approximately 1/3 for even application of coatings and foam.

Due to the direct impingement mixing of the Palm Gun, it may be triggered while aiming at the project surface without producing an ISO spit, or off ratio material.

Gun Shutdown and Cleaning

Removing Palm Gun from Coupling Block:

1. Close A & B material shut off valves on coupling block.
2. With pattern air still on, trigger gun repeatedly to relieve pressure in material ports.
3. Turn off pattern air valve.
4. Close air safety valve on coupling block.
5. Remove gun from coupling block.

Flushing Gun:

1. Fill flush tank approximately $\frac{1}{2}$ full with suitable gun cleaning solvent.
2. Attach gun to flush block on flush tank. Check to see that A & B material o-rings, and air port o-ring is in place.
3. Insure that A & B flush valves on flush block are closed. Attach air supply hose to flush tank to pressurize. Leave air supply hose connected.
4. Attach air whip hose from gun to quick disconnect on tank.
5. Open air/safety valve to provide air to gun.
6. Open A flush valve and trigger gun into suitable waste container until solvent comes out of PCD. Close A flush valve.
7. Open B flush valve and trigger gun into suitable waste container until solvent comes out of PCD. Close B flush valve.
8. Trigger gun repeatedly to relieve pressure in material ports.
9. Remove two air cap bolts and air cap. Place in small container of cleaning solvent.
10. Remove PCD. Trigger gun to remove mix module. Clean ports in mix module with the proper drill size and solvent. Blow off and store dry to prevent swelling in solvent.
11. Repeat steps 6 and 7 above. This step flushes gun without the restriction caused by the small ports in the module. Allow enough solvent flow thru ports to thoroughly flush ports and basket filters.
12. Disconnect gun from flush block and remove o-rings. Store o-rings dry. Remove basket filters. Check for debris in basket filters. Basket filters may be stored in cleaning solvent.
13. Disconnect flush tank air supply.

Note: Once familiar with gun operation and cleaning, gun may be left attached to flush tank until next use.

To clean overspray from gun, a rag that has been soaked in suitable solvent may be wrapped around gun for 15 . 20 minutes to soften overspray.

Do not submerge gun in solvent as o-rings in air cylinder and trigger valve may be damaged.

Troubleshooting

PROBLEM	CAUSE	SOLUTION
Very slight air leakage at sides of air cap	This is normal	No action required
Valving rod does not acuate	No air pressure Low air pressure Rear seal packing nut too tight	Connect air supply, open valve Set air pressure to 100-130 psi Loosen packing nut
Mist from PCD when not triggered	Air cap bolts loose Air cap gun face surface dirty Module bore worn out	Tighten air cap bolts with wrench Clean surfaces, check for nicks Replace module
Excessive overspray	Excessive air flow to air cap Fluid pressure set to high	Reduce air flow with needle valve Reduce fluid pressure
Round pattern is misshapened	PCD orifice is dirty PCD orifice worn	Clean with proper cleanout drill Replace PCD
Pressure imbalance	Module ports dirty Module ports worn A & B viscosity not equal Basket filters dirty	Clean ports with proper cleanout drill Re-dril module ports to next larger size Adjust temperature of A & B Clean basket filters
Gelled, or hardened material in air passages feeding air air cap	Material crossover, air in hoses	Clean or replace check valves
Material leakage at rear seal	Rear seal packing nut too loose Rear seal worn or damaged	Tighten packing nut slightly Replace rear seal
Rapid material buildup on PCD or air cap	Insuficient air flow to air cap Worn orifice in PCD	Increase air flow Replace PCD
Gun triggers slowly	O-rings dry	Lubricate with air tool oil
Air leakage under trigger paddle	Damaged spool valve o-rings Damaged or worn piston o-ring	Replace spool valve o-rings Replace piston o-ring

Parts Identification Section

Repair and Tool Kit List

PSG3015 Trigger O-ring Repair Kit

Includes:

1	PSG2005	Spring, Spool Valve
6	PSG2025	O-ring, Spool Valve

PSG3006 Air Cylinder Repair Kit

Includes:

3	PSG3014	O-ring
1	PSG3008	O-ring, Front Cap
1	PSG3010	O-ring
2	PSG3011	Snap Ring, External
2	PSG3004	Pan Head Screw
1	PSG3007	Internal Snap Ring

PSG3016 Start Up Kit

Includes:

1	PSG9004-24	PCD, Round Pattern, .024
2	PSG9001-13	Module, Mix, Round Pattern, .013
6	PSG2008	O-ring
4	PSG4003	O-ring, Coupling Block
6	PSG2024	Check Valve Sleeve
4	PSG2023	Check Valve Spring and Ball
1	PSG2021	Rear Seal
2	PSG5012	Cartridge Filter
2	PSG2016	Basket Filter

PSG9000 Tool Kit

Includes:

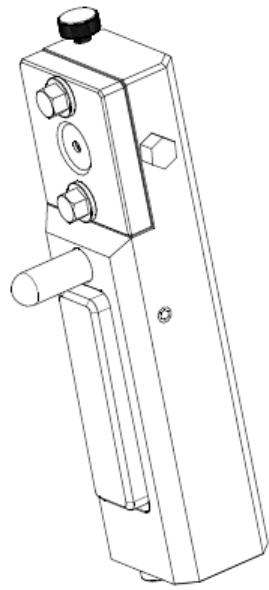
1	PSG9009	Nut Driver
1	PSG9010	Combination Wrench
1	PSG9011	Pin Vise, Small
1	PSG9015	Drill Index
1	PSG9012	Drill Bit, 7/64
1	PSG9014	Drill Bit, .149

O-RING KITS: Package of 12 for price of 10

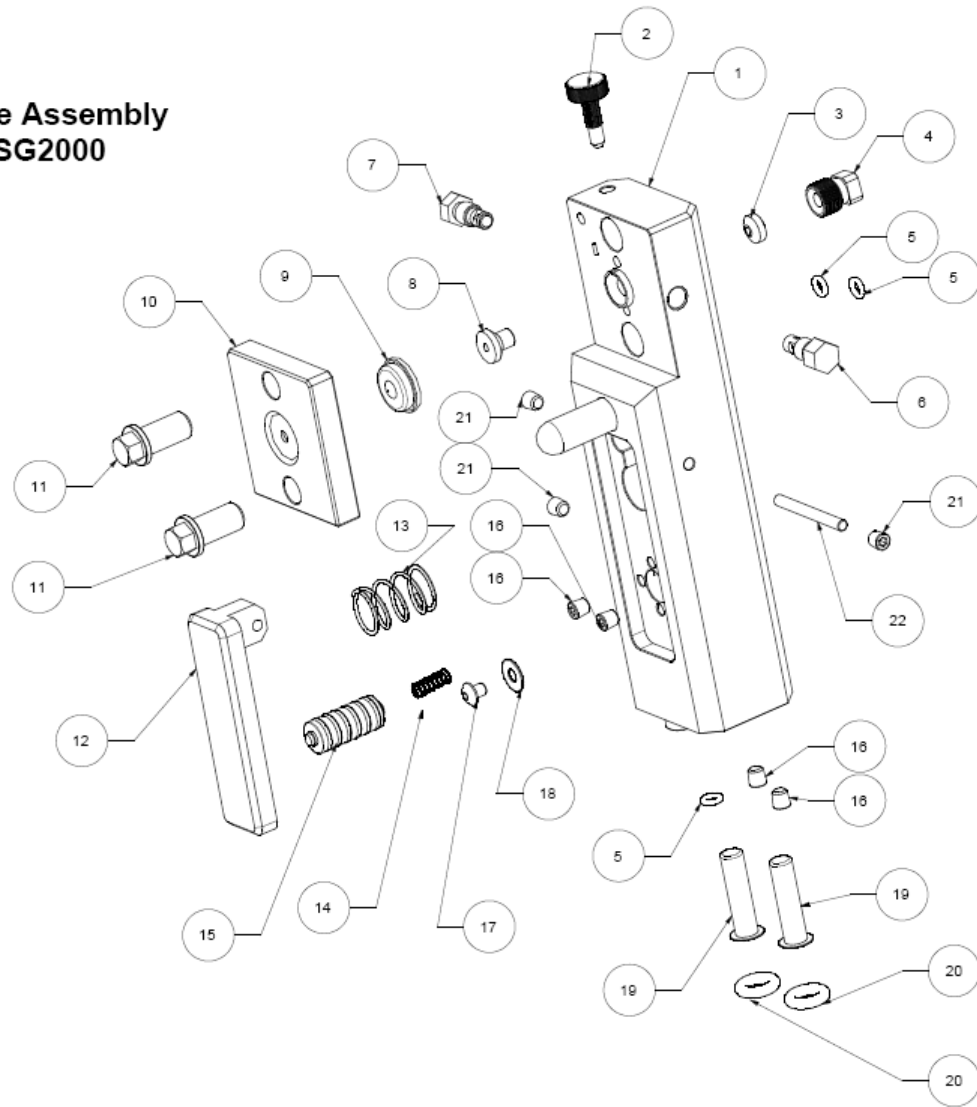
PSG4003-PKG
PSG2008-PKG
PSG3008-PKG
PSG3010-PKG
PSG3014-PKG

DRILL KIT:

PSG9015 DRILL INDEX, #80-#61



**Handle Assembly
PSG2000**



Handle Assembly PSG2000

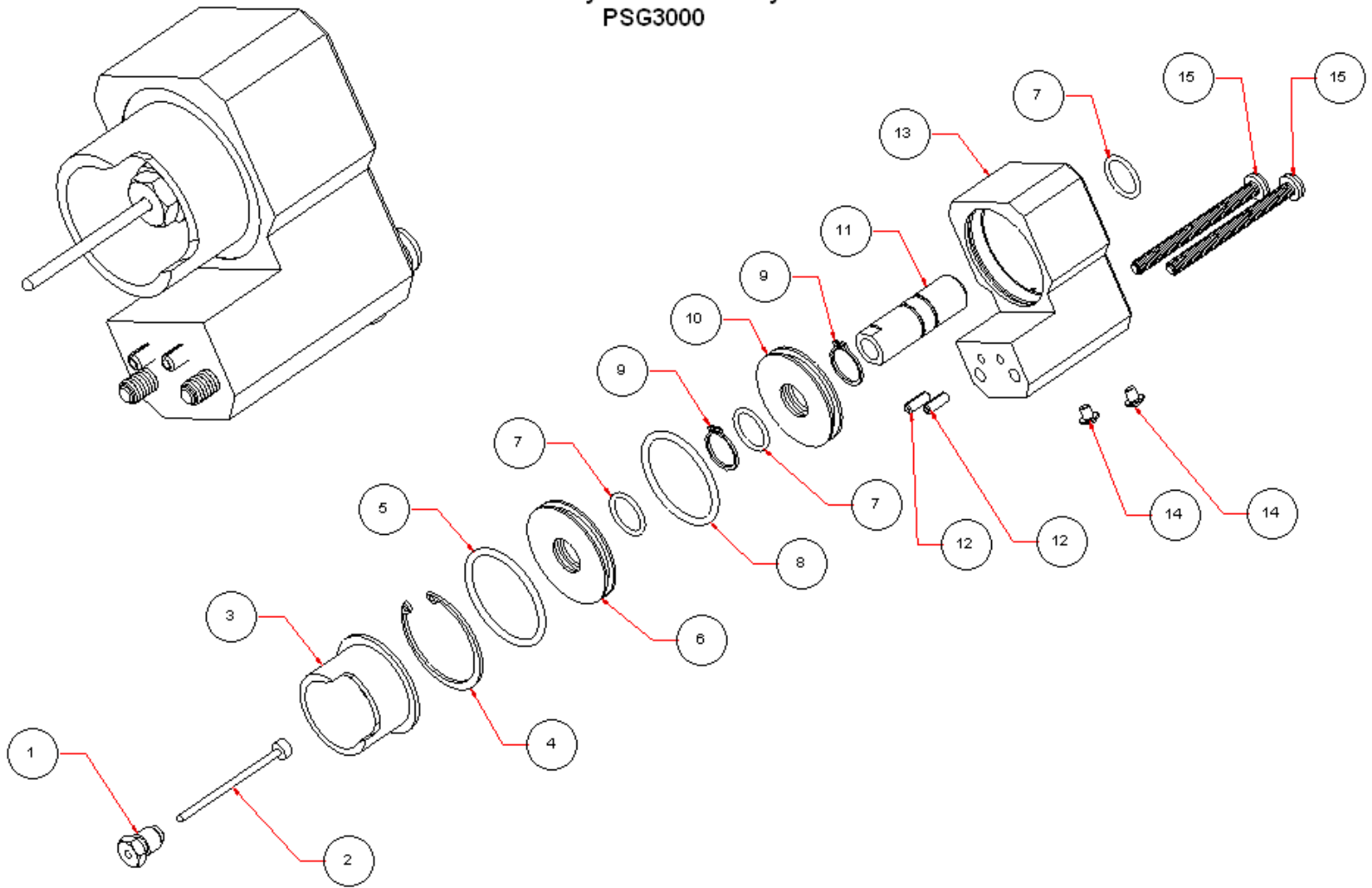
ITEM #	PART NUMBER	QTY. USED	DESCRIPTION
1	PSG2001	1	Handle
2	PSG2017	1	Air Needle Valve
3	PSG2021	1	Rear Seal
4	PSG2022	1	Rear Seal Packing Nut
5	PSG2008	3	O-Ring
6	PSG2019	1	Check Valve - A
7	PSG2020	1	Check Valve - R
8	See Chart Below	1	Module, Mix
9	See Chart Below	1	PCD
10	PSG2002	1	Air Cap
11	PSG2012	2	Air Cap Bolt
12	PSG2003	1	Trigger Paddle
13	PSG2009	1	Spring, Trigger Paddle
14	PSG2005	1	Spring, Spool Valve
15	PSG2004	1	Spool Valve
16	PSG2015	4	6-32 Set Screw
17	PSG2006	1	Button Head Cap Screw
18	PSG2007	1	Washer
19	PSG2016	2	Basket Filter
20	PSG4003	2	O-Ring
21	PSG2014	3	8-32 Set Screw
22	PSG2011	1	Dowel Pin

Note: The Palm Gun Comes Standard With:
Round Pattern Mix Module (PSG9001-13)
Round Pattern PCD (PSG9004-24)

ROUND SPRAY PATTERN SET UP			
8	PSG9001-13	1	Module, Mix, Round Pattern, .013
9	PSG9003-20	1	PCD, Round Pattern, .020 Orifice
9	PSG9004-24	1	PCD, Round Pattern, .024 Orifice
9	PSG9020-28	1	PCD, Round Pattern, .028 Orifice
9	PSG9021-36	1	PCD, Round Pattern, .036 Orifice

Fan Spray Pattern Set Up			
8	PSG9002-13	1	Module, Mix, .013
9	PSG9005	1	PCD, Fan Pattern, 6" - 7" Wide
9	PSG9006	1	PCD, Fan Pattern, 7" - 8" Wide

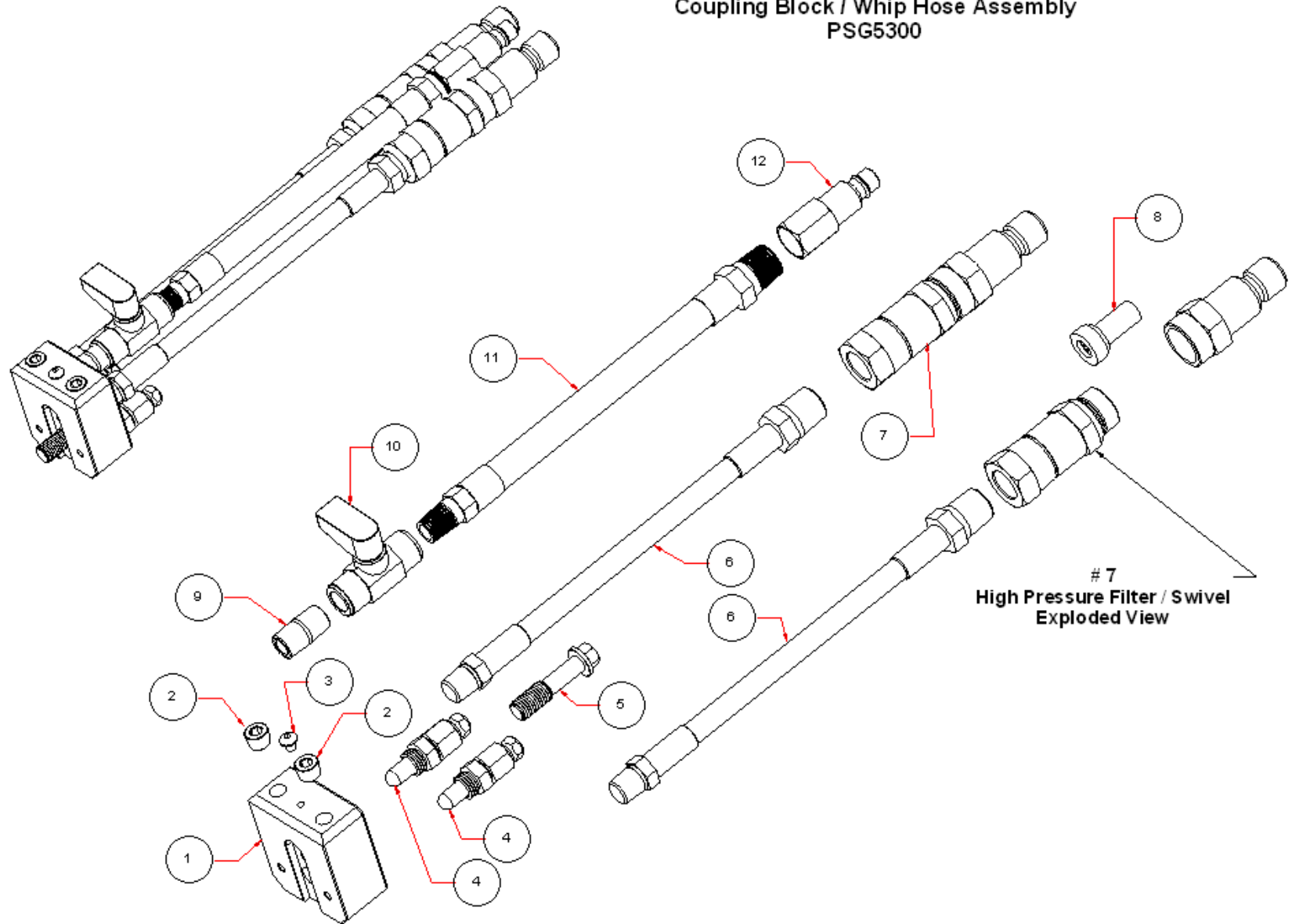
Air Cylinder Assembly
PSG3000



**Parts List
Air Cylinder Assembly
PSG3000**

ITEM	PART NUMBER	QTY. USED	DESCRIPTION
1	PSG4001	1	Valving Rod Bolt
2	PSG4000	1	Valving Rod
3	PSG3005	1	Valving Rod Cover
4	PSG3007	1	Internal Snap Ring
5	PSG3008	1	O-Ring
6	PSG3009	1	Front Cap
7	PSG3014	3	O-Ring
8	PSG3010	1	O-Ring
9	PSG3011	2	Snap Ring, External
10	PSG3012	1	Piston
11	PSG3013	1	Piston Shaft
12	PSG2026	2	Roll Pin
13	PSG3001	1	Air Cylinder
14	PSG2006	2	Button Head Cap Screw
15	PSG3004	2	Pan Head Screw

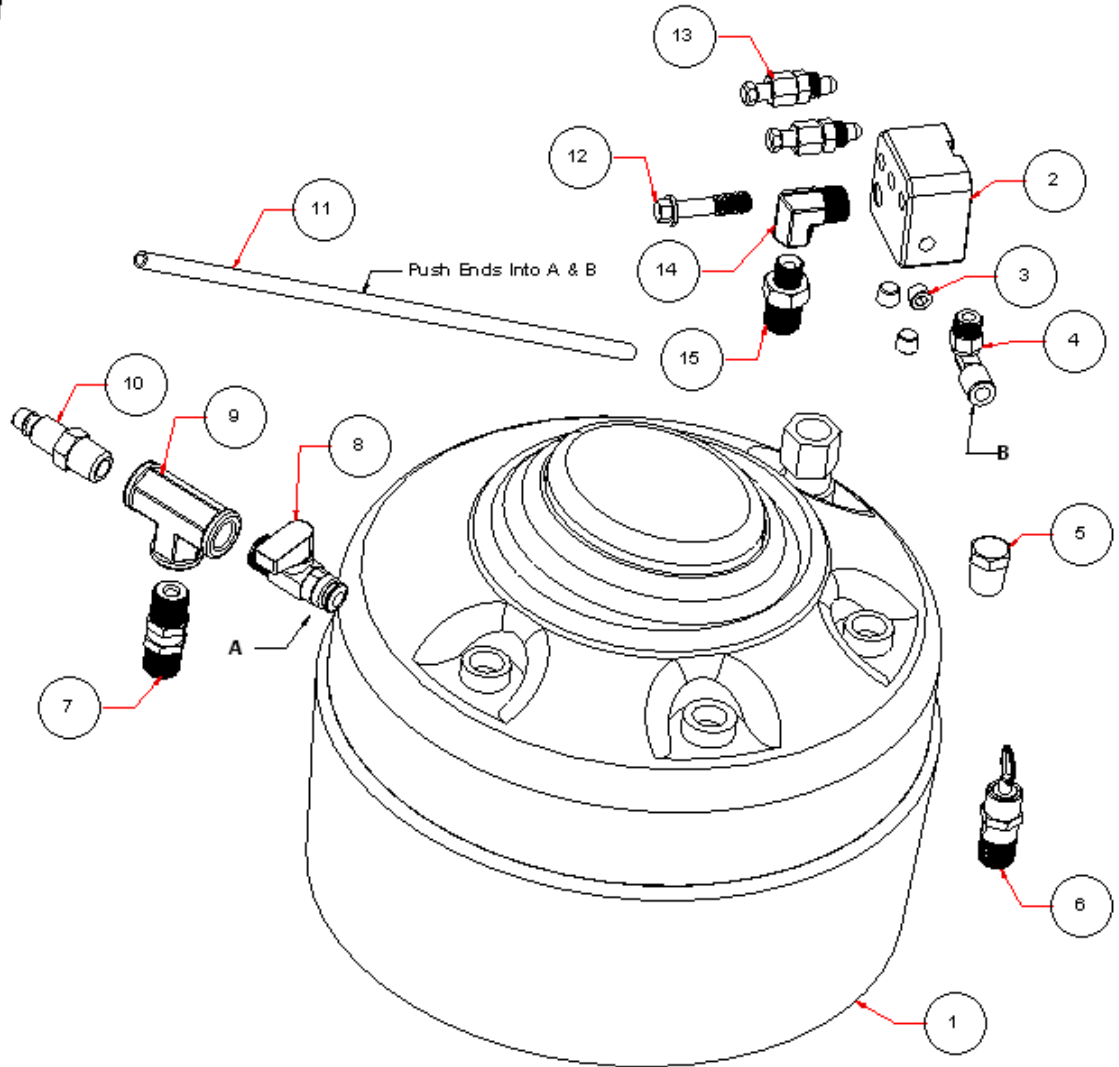
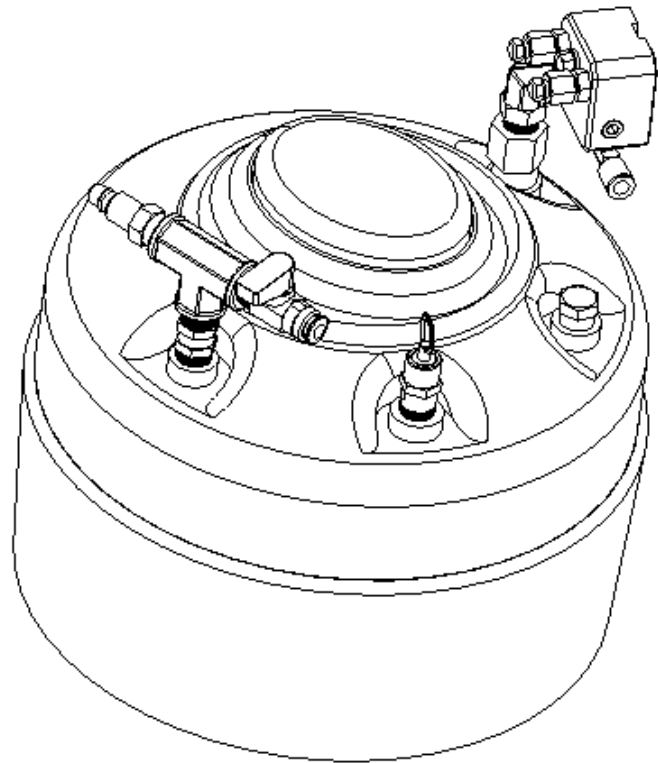
**Coupling Block / Whip Hose Assembly
PSG5300**



**Coupling Block / Whip Hose Assembly
PSG5300**

	PART	QTY.	
ITEM	NUMBER	USED	DESCRIPTION
1	PSG5001	1	Coupling Block
2	PSG5004	2	Pipe Plug
3	PSG2006	1	Button Head Cap Screw
4	PSG5500	2	Manual Valve
5	PSG5003	1	Coupling Block Bolt
6	PSG5007	2	Whip Hose, A or B, 3 Ft.
7	PSG5009	2	Filter Swivel Assembly
8	PSG5012	2	Cartridge Filter, 60 Mesh
9	PSG7004	1	Pipe Nipple
10	PSG5013A	1	Air/Safety Valve
11	PSG5008A	1	Whip Hose, Air, 3 Ft. 6"
12	PSG7008	1	Nipple, Male QD

Flush Tank Assembly PSG 8000-A



Flush Tank Assembly PSG8000-A

	PART	QTY.	
ITEM #	NUMBER	USED	DESCRIPTION
1	PSG8001	1	Flush Tank, 1 Gallon
2	PSG7001	1	Flush Block
3	PSG5004	3	Pipe Plug
4	PSG8005	1	Elbow
5	PSG7006	1	Pipe Plug
6	PSG7002	1	Relief Valve
7	PSG7012	1	Check Valve
8	PSG5005	1	Air Valve
9	PSG7007	1	Pipe Tee
10	PSG8009	1	Nipple, QD
11	PSG8008	1	Tubing, Plastic
12	PSG5003	1	Coupling Block Bolt
13	PSG5500	2	Manual Valve Assembly
14	PSG8006	1	Street Elbow
15	PSG8007	1	Reducer Elbow

PENTECH, INC.

Standard Warranty

Pentech, Inc. provides a limited warranty to the original purchaser of Pentech manufactured parts and equipment against any defects in material or workmanship for a period of one year from the date of shipment from Pentech, Inc.

In the event product is suspected to be defective in material or workmanship, product must be returned in a cleaned and flushed condition, freight prepaid, in suitable packaging, using a Returned Material Authorization (RMA) number issued by Pentech, Inc.

If product is found to be defective in material or workmanship, Pentech will issue full credit to customer for the freight charges involved in returning the product to Pentech. A credit will be issued for the replacement cost of the part, or a replacement part will be sent to the customer, no charge, freight prepaid.

This warranty shall not apply to product that Pentech determines to be damaged by misuse, normal wear, or negligence by the customer.

Mailing Address:

PENTECH, INC.

P.O. Box 274
Tallevast, FL 34270-0274

Shipping Address:

PENTECH, INC.

7256 21st Street East
Sarasota, FL 34243

Phone - 941-739-2700

Fax . 941-739-2722

www.pentech.us