



**Plasma Powders & Systems, Inc.
PPS-5K Part List**



**PPS-5K ELECTRIC DRIVE
WIRE METALIZING GUN**



Plasma Powders & Systems, Inc. PPS-5K Part List

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CAUTION:

Read and understand this entire manual before attempting to use this equipment. Safety precautions must be strictly adhered to in order to maintain a safe environment for the user and surrounding area. Under NO circumstances should any modifications be made to this manual or the equipment without prior written approval from Plasma Powders & Systems, Inc.

DISCLAIMER:

This document represents a collective effort involving a substantial number of volunteer specialists. Great care has been taken in the compilation and production of this document, but it should be made clear that no warranties, express or implied, including without limitation, warranties of merchantability or fitness for a particular purpose are given in connection with this document.

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Nothing contained in this document should be construed as a grant of any right of manufacture, sale, use, or reproduction, in connection with any method, process, apparatus, product, composition, or system, and nothing contained in this document should be construed as a defense against any alleged. This user's manual is intended to provide adequate information about the PF 2810 Powder Feeder to the reader. The information provided in this manual includes the installation, operation and maintenance information for same.

Failure to observe the information provided herein may result in risk to personnel health and safety, as well as damage to equipment and surrounding area.

The document must be stored by a person charged to do so. In case of loss or damage, replacement of this documentation must be made by a request to Plasma Powders & Systems, Inc.



Plasma Powders & Systems, Inc. PPS-5K Part List Section 1: Understanding this document

The Plasma Powders WireJet-96 Combustion Wire metalizing gun is a direct replacement for the Metco 12E gun. All of the parts in this gun are interchangeable with OEM Metco parts. The part number suffix (*i.e. the portion after the dash “-“*) should match the OEM Metco part number.

For example:

If you used to order a **5K-7-48** Nozzle, the PPS number would be **PPS5K-7-48**.

To make matters more confusing, the 5K, 12E, 14E and 16E guns share some identical parts.

So an order for a **5K-7-48** Nozzle would be shipped as a **12E-7-48** Nozzle. They are the same exact part.

Metco also has a 6 digit numeric catalog number... We can cross reference these as well but we ask that you try to match your parts to the numbers and pictures in this document.

Regardless of the prefix, Plasma Powders staff will cross reference the parts requested and contact you with any questions.

It is highly recommended that you supply the following information with a request for quote each time.

Manufacturer and Model of equipment: (i.e. Metco 5K gun or PPS5K)

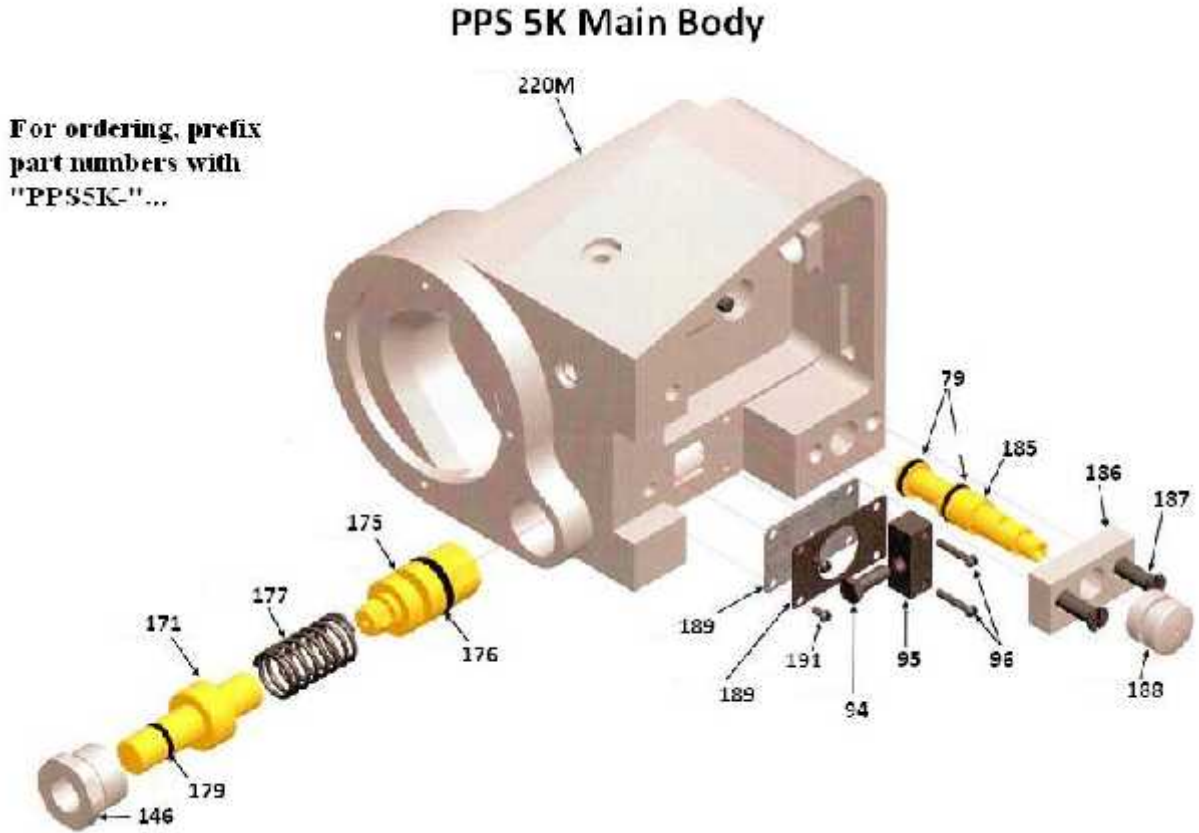
Gas used in your shop: (i.e. Acetylene or Propane)

Material type and Wire Size you use: (i.e. Stainless, Zinc, 1/8” or 3/16”)

This information will help ensure that you get the correct parts!

Section 2: Part List

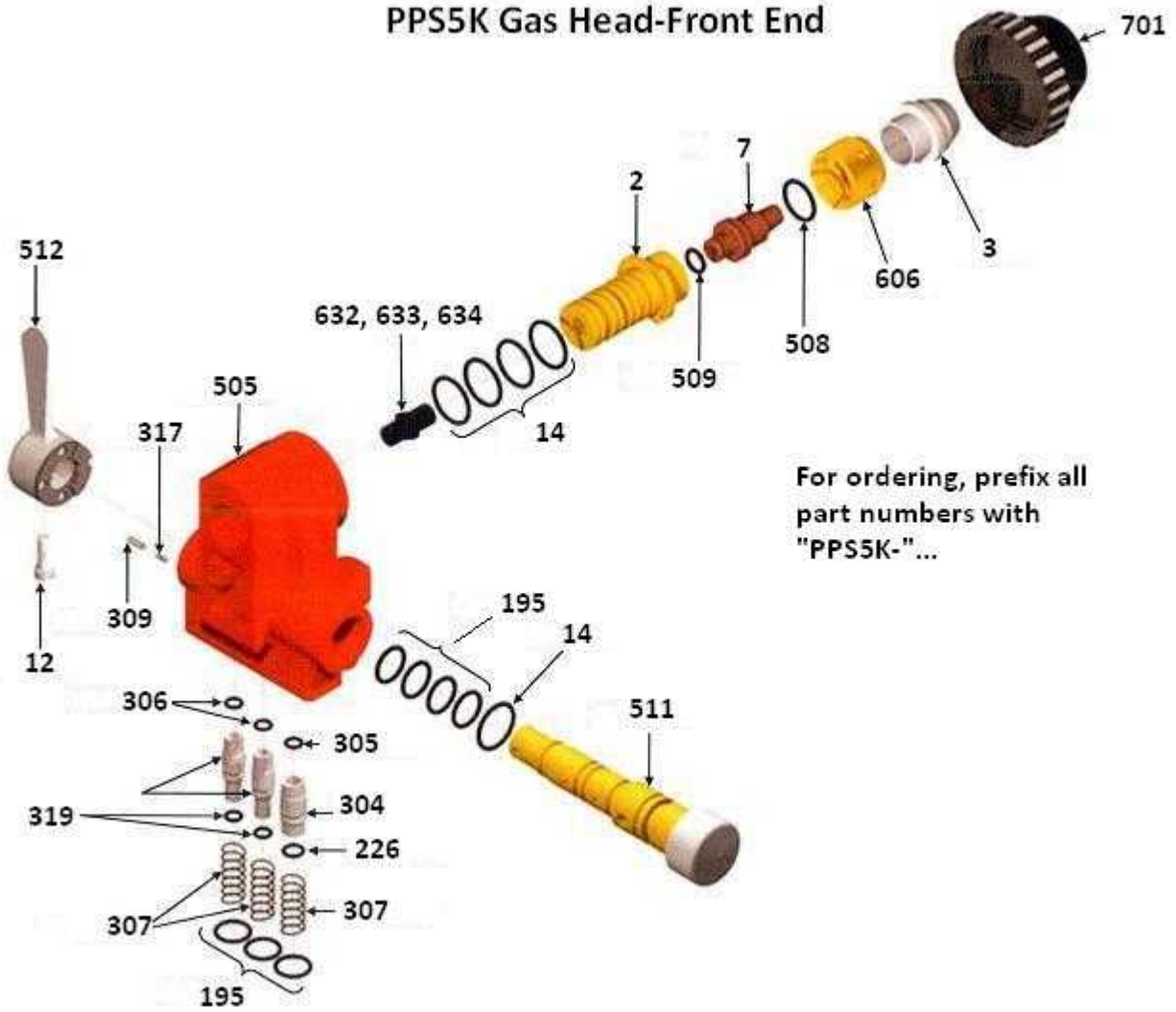
2.1 Main Body



Main Body Parts:

PPS5K-220M	Main Gun Body	PPS5K-177	Compression Spring
PPS5K-79	Valve Stem O-ring	PPS5K-185	Valve Stem
PPS5K-94	Drive Roll Adjustment Screw	PPS5K-186	Stop Plate
PPS5K-95	Adjusting Screw Block	PPS5K-187	Stop Plate Screw
PPS5K-96	Screw	PPS5K-188	Valve Stem Knob
PPS5K-146	Dust Seal Housing	PPS5K-189	Piston Seal Retainer
PPS5K-171	Spring Cap	PPS5K-191	Retainer Screw
PPS5K-175	Piston Assembly	PPS5K-184	O-Ring Kit- Complete
PPS5K-176	Piston O-ring		

2.2 Gas Head and Front End



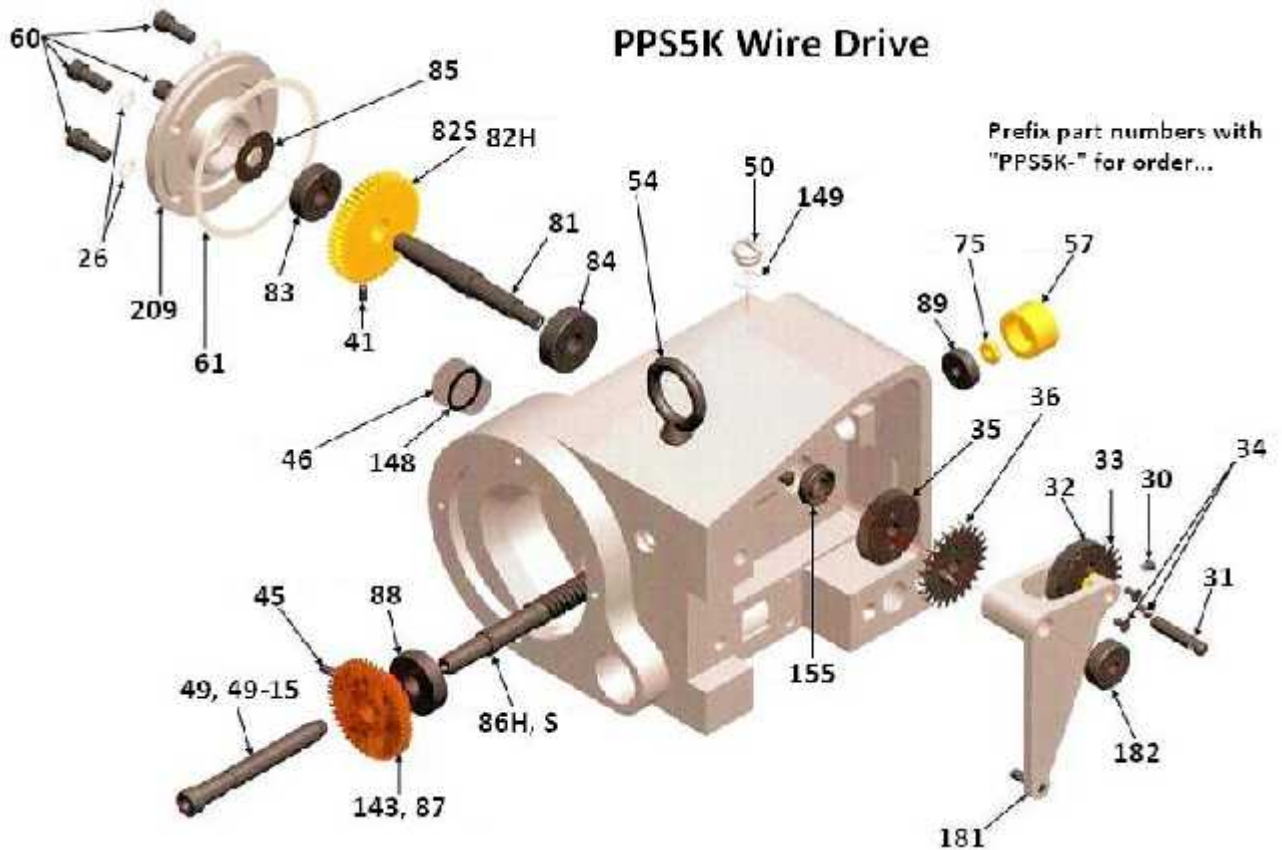


Plasma Powders & Systems, Inc. PPS-5K Part List

Gas Head/Front End Parts:

PPS5K12	Valve handle screw	PPS5K 2-x	Siphon plug (See Selection Chart)
PPS5K14	O-Ring: Main housing air seal/Valve core/Siphon Plug PK/6	PPS5K 3-x	Air Cap (See Selection Chart)
PPS5K 195	O-Ring: Valve core & Base gas head PK/7	PPS5K 4-x	Air Cap (See Selection Chart)
PPS5K 226	O-Ring: Air Plunger PK/3	PPS5K 7-x	Nozzle (See Selection Chart)
PPS5K 303	Fuel gas & oxygen plunger	PPS5K 200-1	Siphon Plug Assy. 3/16"
PPS5K 304	Air plunger	PPS5K 200-2	Siphon Plug Assy. 1/8"
PPS5K 305	O-Ring: Air Seal PK/1	PPS5K 200-3	Siphon Plug Assy. 11 Ga.
PPS5K 306	O-Ring: Gas & Oxy Seal PK/2	PPS5K 508	O-Ring: Nozzle Large PK/2
PPS5K 307	Plunger spring PK/3	PPS5K 509	O-Ring: Nozzle Small PK/2
PPS5K 309	Detent Pin	PPS5K 590	O-Ring: Siphon Plug, Nozzle PK/10
PPS5K 317	Detent Pin Spring	PPS5K 606	Nozzle Nut
PPS5K 319	O-Ring: Gas & Oxy Plungers PK/2	PPS5K 625	Fan Spray Hardware Package
PPS5K 505	Gas head assembly	PPS5K 632	Front Wire Guide (3/16 - 1/8")
PPS5K 511	Valve core	PPS5K 633	Front Wire Guide (1/8" – 11 Ga.)
PPS5K 512	Valve handle	PPS5K 634	Front Wire Guide 15 ga.
PPS5K 515	Gas Head	PPS5K 701	Air Cap Body
PPS5K 680	O-Ring Kit Complete PK/36		

2.3 Wire Drive



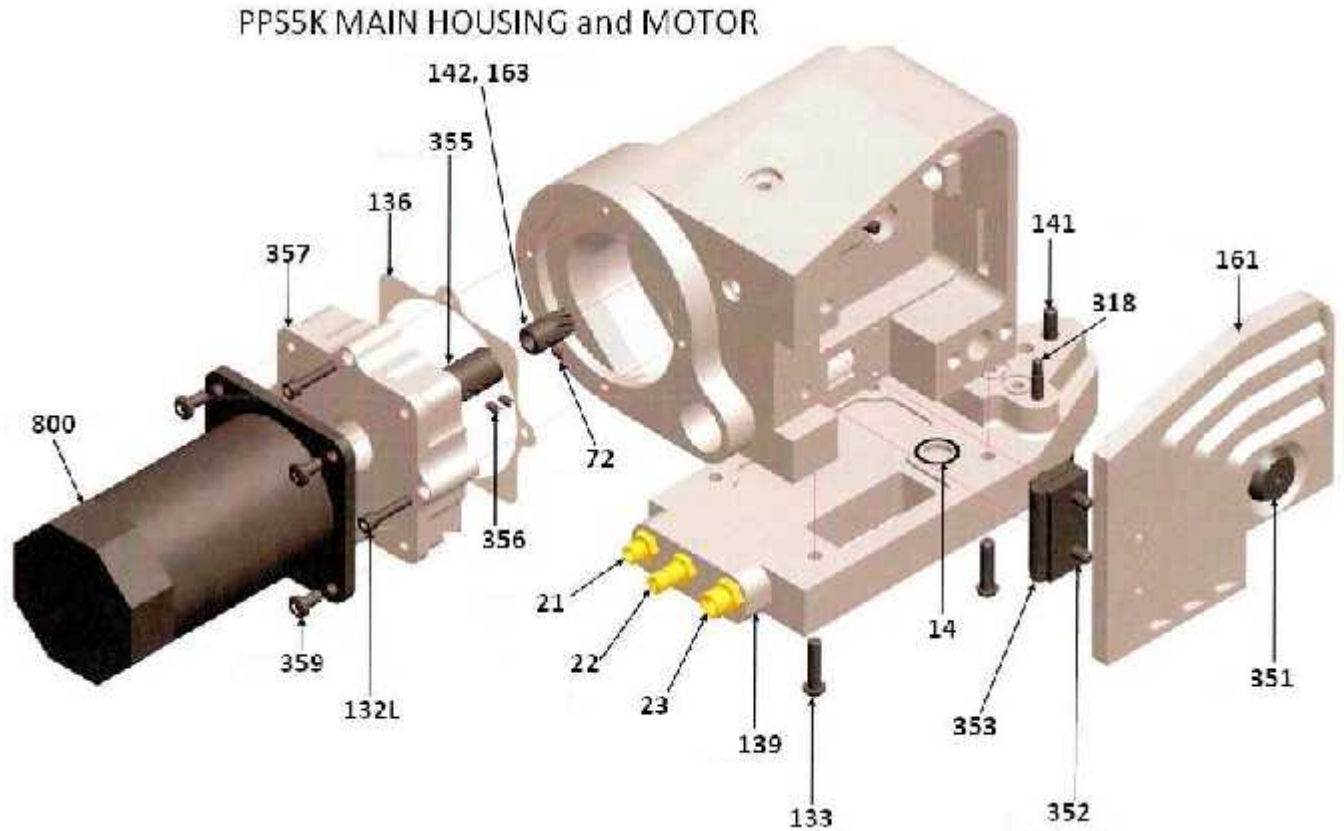


Plasma Powders & Systems, Inc. PPS-5K Part List

Wire Drive Parts:

PPS5K 50	Oil filler plug	PPS5K 88	Rear countershaft bearing
PPS5K 54	Eye Bolt	PPS5K 89	Front countershaft bearing
PPS5K 142	Motor Shaft Gear	PPS5K 115	Drive shaft inserting pin
PPS5K 148	Oil Level Sight Plug	PPS5K 143	Countershaft gear
PPS5K 149	Oil Filler washer	PPS5K 155	Drive shaft seal
PPS5K 26	Cover screw washer PK/5	PPS5K 209	Gear cover
PPS5K 41	Set screw	PPS5K 30	Axle set screw PK/5
PPS5K 45	Countershaft gear set screw PK/2	PPS5K 31	Drive roll axle
PPS5K 57	Countershaft front bearing retainer	PPS5K 32	Upper drive roll 3/16-11 gage
PPS5K 60	Cover screw	PPS5K 32-11	Upper drive roll small gage
PPS5K 61	Gear Cover Gasket	PPS5K 33	Upper drive gear
PPS5K 75	Countershaft Bearing Nut	PPS5K 34	Screw PK/5
PPS5K 81	Drive shaft	PPS5K 35	Lower drive roll
PPS5K 82H	Driveshaft worm gear Std Speed	PPS5K 35-11	Lower drive roll small gage
PPS5K 82S	Driveshaft worm gear Low Speed	PPS5K 36	Lower roll gear
PPS5K 83	Left drive shaft bearing	PPS5K 49	Rear wire guide
PPS5K 84	Right drive shaft bearing	PPS5K 49-15	Rear wire guide - small gage
PPS5K 85	Finger spring	PPS5K 168	Rear wire guide set screw
PPS5K 86H	Countershaft – Std speed	PPS5K 181	Upper drive roll carrier
PPS5K 86S	Countershaft – Low speed	PPS5K 182	Upper drive roll carrier nut
PPS5K 87	Speed countershaft gear - high	PPS5K 190	Piston Seal

2.4 Main Housing - Motor



Main Housing and Motor

PPS5K-14	Main Housing Air Seal	PPS5K-161	Door
PPS5K-21	Fuel Gas Hose Connection	PPS5K-318	Valve Core Stop Screw
PPS5K-22	Oxygen Hose Connection	PPS5K-351	Door Lock
PPS5K-23	Air Hose Connection	PPS5K-352	Door Screw
PPS5K-72	Gear Set Screw	PPS5K-353	Door Hinge
PPS5K-132L	Motor Mounting Screw	PPS5K-355	Motor Bushing
PPS5K-133	Main Housing Mounting Screw PK/5	PPS5K-356	Motor Bushing Screw
PPS5K-136M	Motor Flange Gasket	PPS5K-357	Motor Flange
PPS5K-139	Hose Connect Block (incl-21,-22 & 23)	PPS5K-358	Motor (Brushless AC)
PPS5K-141	Gas Head Mounting Screw	PPS5K-359	Motor Flange Screw
PPS5K-142	Motor Shaft Gear Std Speed	PPS5K-800	Motor
PPS5K-163	Motor Shaft Gear (high speed)		

2.5 Power Supply (PPS5K-500/900 ASSY)



PPS5K-901

PPS5K-918

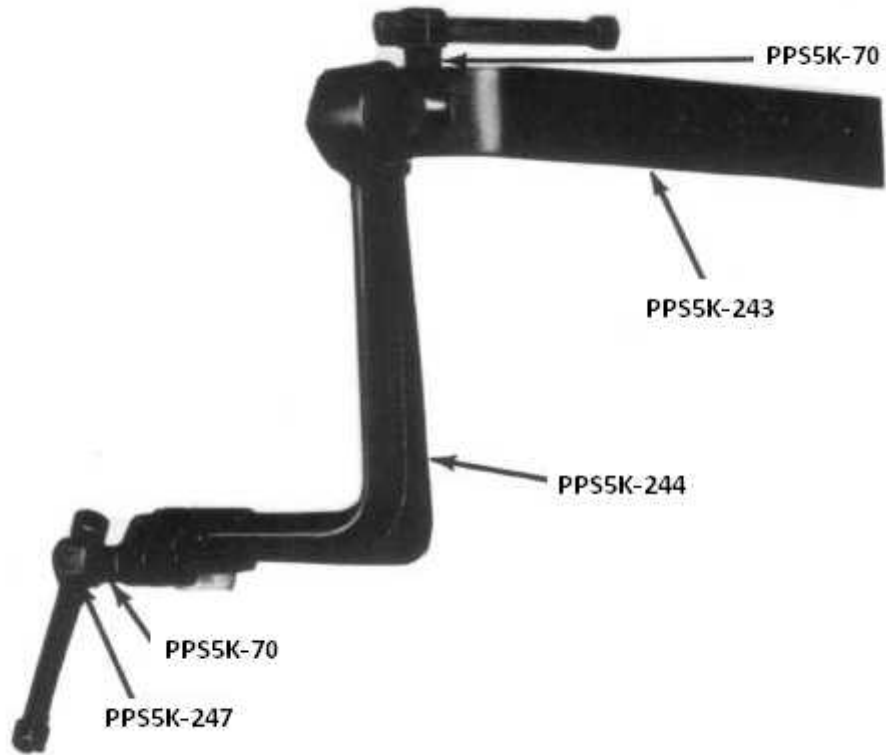


PPS5K-435
 PPS5K-451

Power Supply

PPS5K-502	Power Supply Extension Cable Inc. 501 & 601
PPS5K-503	Motor Cable - Inc. 501 & 601
PPS5K-501	Receptacle
PPS5K-601	Plug
PPS5K-901	Speed Control
PPS5K-918	Switch (On-Off)
PPS5K-435	Fuse Holder
PPS5K-451	Fuse (5/pkg)
PPS5K-500/900	Full Assembly

2.6 Tool Post Fixture





Plasma Powders & Systems, Inc. PPS-5K Part List

Section 3: Hardware Selection Charts

3.1 Plasma Powders 5K Nozzles

(Use PPS5K- prefix when ordering)

Part No.	Description	Part No.	Description	Part No.	Description
7-26	ACET 1/8 N/L	7-30	ACET 15G 1.5MM N/L	7-43	PROP 3/16
7-27	PROP 1/8 N/L	7-32	PROP 15G N/L	7-44	MPS 3/16
7-29	ACET 15G 4 HOLE	7-35	ACET 11G 2.5MM	7-44P	PROP 3/16
7-29-15-10	ACET 15G 10 HOLE	7-36	ACET 11G N/L	7-45	ACET 3/16 N/L
7-29-15-6	ACET 15G 6 HOLE	7-37	PROP 11G	7-46N/L	PROP 3/16 N/L
7-29-15-8	ACET 15G 8 HOLE	7-38	PROP 11G N/L	7-48	ACET 1/8
7-29-20GA	ACET 20G	7-41	ACET 11G	7-49	PROP 1/8
		7-42	ACET 3/16	7-SPL	ACET 1/8 4

3.2 Plasma Powders 5K Air Cap, Siphon Plug, Front Wire Guides

(Use PPS5K- prefix when ordering)

Part No.	Description	Part No.	Description
3-AH	Air Cap 3/16" N/L	2-5	SIPHON PLUG ACET 1/8" – 11 GA.
3-C	Air Cap	2-6	SIPHON PLUG PROP 1/8"
3-CH	Air Cap 1/8" N/L	2-7	SIPHON PLUG ACET 15GA.
3-EA	Air Cap 3/16"	2-8	SIPHON PLUG PROP 1/16"
3-EC	Air Cap 1/8"		
3-J	Air Cap 11Ga.	23-1/8	FRONT WIRE GUIDE 1/8"
3-JH	Air Cap 11Ga. N/L	23-3/16	FRONT WIRE GUIDE 3/16"
3-M	Air Cap 15Ga.	23-15GA	FRONT WIRE GUIDE 15 GAUGE
3-MH	Air Cap 15Ga. N/L		
3-N	Air Cap	6	Nozzle Nut
4-AB	Air Cap Fan Spray 1/8"	14	O-Rings: Siphon Plug PK/6
4-CD	Air Cap Fan Spray 3/16"	108	O-Ring: Nozzle Large
		109	O-Ring: Nozzle Small



Plasma Powders & Systems, Inc. PPS-5K Part List

3.3 Gas Head Hardware Selection Table

Fuel Gas	Wire Size	Jetted			Jetted Non-Loading		
		Nozzle PPS5K-7-	Siphon Plug PPS5K-2-	Air Cap PPS5K-3-	Nozzle PPS5K-7-	Siphon Plug PPS5K-2-	Air Cap PPS5K-3-
Acet Hyd.	3/16	42	5	EA	45	5	AH
	1/8	48	5	EC	26	5	CH
	11 Ga.	35	5	J	36	5	JH
	15 Ga.	29	7	M	30	7	JH-MH
Prop. Nat-gas	3/16	43	6	EA	46	6	AH
	1/8	49	6	EC	27	6	CH
	11 Ga.	37	6	J	38	6	JH
	15 Ga.	31	8	M	32	8	JH-MH
For Jetted AND Non-Loading hardware: Use Nozzle Nut PPS5K-6 Fan Spray Air Caps: 3/16" wire use PPS5K-4-AB 1/8" wire use PPS5K-4-CD							

3.4 Wire Guide & Drive Roll Selection Table

Wire Size	Wire Guides		Drive Rolls	
	Front	Rear	Upper Assembly (Note 1)	Lower (Note 2)
3/16 & 1/8	PPS5K-632 (Note 3)	PPS5K-49	PPS5K-32	PPS5K-35
11 Ga.	PPS5K-633 (Note 3)	PPS5K-49	PPS5K-32-11	PPS5K-35-11
15 Ga.	PPS5K-634	PPS5K-49-15	PPS5K-32-11	PPS5K-35-11

Notes:

1. Upper drive gear PPS5K-33 and 3 screws (PPS5K-34) are used with standard and small gauge upper drive rolls.
2. Lower drive gear assembly PPS5K-36 is used with standard and small gauge lower drive rolls.
3. Front wire guide PPS5K-633 has a smaller bore than PPS5K-632 and is recommended for 11 gauge wire to minimize buckling. This guide will accept 1/8" wire as well.



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PPS-5K Part List**

3.5 Wire Drive Unit Gear Selection Table

Gears & Shafts	Gear Set	
	Standard	High Speed
Motor Gear	PPS5K-142	PPS5K-163
Countershaft Gear	PPS5K-143 Set Screw = PPS5K-45	PPS5K-87 Set Screw = PPS5K-41
Countershaft	PPS5K-86-S	PPS5K-86-H
Drive Shaft Gear	PPS5K-82-S	PPS5K-82-H

Notes:

- 1. Standard gears are used for all wires unless otherwise noted in the Spray Tables.**
- 2. All motor gears use set screw PPS5K-72.**
- 3. All drive shaft gears use set screw PPS5K-41.**



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