



**HVLP AIR CAP AND FLUID NOZZLE CHART**

MODEL NO.	AIR CAPS	Press / Siphon	*MAX GUN INLET PRESS. FOR HVLP	FAN CONTROL	SCFM @ MAX GUN INLET	AIR CAP RING	AVAILABLE FLUID NOZZLES TIPS	NEEDLES / marking on needle
P100H	21-1090	pressure	15	60-1502 (#2)	6	21-1001	31-0205 0.5mm (.020")	40-1100 (100)
	21-1091	pressure	15		8		31-0208 0.8mm (.022")	
	21-1092	pressure	15		8		31-0210 1.0mm (.040")	
	21-1093	pressure	18		10		31-0212 1.2mm (.046")	
	21-1094	pressure	33		13		31-0213 1.3mm (.052")	
	21-1095	pressure	50		22.5		31-0214 1.4mm (.055")	
	21-1095T	pressure	50		22.5		31-0215 1.5mm (.059")	
	21-1097	pressure	50		22.5		31-0216 1.6mm (.063")	
	21-1195	pressure	50		22.5		31-0217 1.7mm (.070")	
	21-1197	pressure	50		22.5	included	31-0412 1.2Fmm (.046")	
						31-0414 1.4Fmm (.055")	40-1114F (114F)	
						31-0417 1.7Fmm (.070")	40-1117F (117F)	

\*Note: Air cap test gages are available to confirm HVLP compliance.  
Actual fluid nozzle and air cap combinations are determined by application (see application chart page 4)  
\*Gun inlet pressures may vary as required by application

# Operation and Maintenance Instructions for *P100H* Spray Guns

## Operation

1. Connect air supply hose at handle of gun.
2. Connect a pressurized fluid supply to the gun fluid inlet.
3. Fluid flow can be controlled using the fluid control knob, this restricts flow by limiting needle travel. It is best to control fluid flow by proper selection of fluid orifice size and use the fluid control knob to “fine tune flow rate”.
4. Fan width can be adjusted using the fan control knob. Turning the knob clockwise narrows the fan.

## Maintenance

IMPORTANT! Routine cleaning and maintenance is essential to insure proper gun operation.

Several states prohibit spraying solvent into the atmosphere and require the use of covered gun cleaner.

1. If a gun cleaner is being used, connect and clean the gun in the gun cleaner according to the manufactures instructions.
2. If a gun cleaner is not being used:  
Remove air cap and clean separately using clean solvent.  
For pressure setups, connect a pressurized solvent supply to the fluid inlet, trigger the gun allowing solvent to flow thru the gun until clean.

**NOTE: Gun head disassembly is not recommended for normal cleaning and maintenance.**

### **Gun head disassembly and reassembly instructions:**

Have repair kit # 10-110 available before gun disassembly.

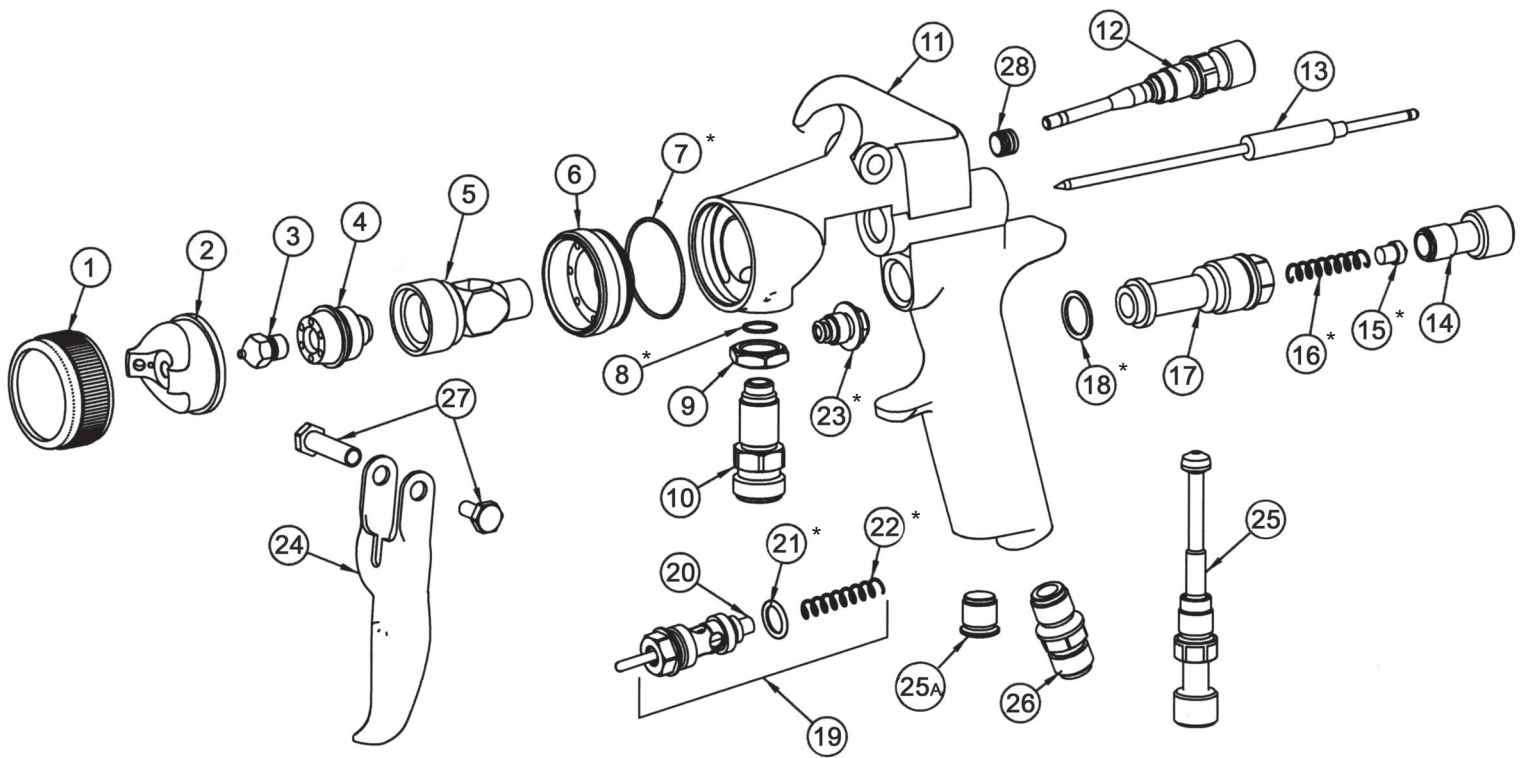
#### **Gun head disassembly**

To remove the nozzle carrier (5) and air cap adapter (6):

1. Remove the air cap (1-2), fluid nozzle tip (3), fluid nozzle body (4), and needle (13).
2. Remove the needle seal cartridge (23).
3. Loosen the locknut (9) and remove fluid inlet (10) using a 5/8” open-end wrench.
4. The nozzle carrier (5) and air cap adapter (6) will now slide forward from the gun body (11).

#### **Gun head reassembly**

1. Install a new o-ring (7) on the air cap adapter (6).
2. Install the thread locknut (9) onto the fluid inlet (10) as far as possible.
3. Install a new fluid inlet seal (8) into the recess area on the nozzle carrier (5) inlet port.
4. Slide the nozzle carrier (5) into air cap adapter (6) and insert into the gun body (11) as far as possible. Be sure the nozzle carrier (5) extends into the hole at the back of the gun head. Install the needle seal (23) but do not tighten.
5. Rotate the nozzle carrier (5) until the fluid inlet port in the nozzle carrier (5) is aligned with the threaded hole in the body. While in this position, insert the fluid inlet (10) and tighten firmly.
6. Tighten the needle seal (23) to approx. 12 ft.-lb. torque.
7. Tighten the fluid inlet (10) to approx. 25 ft.-lb. torque.
8. Tighten the locknut (9) to approx. 33 ft.-lb. torque.



**HVLP AIR CAP TEST GAGES**

FOR P100H GUNS	21-1090-G
	21-1092-G
	21-1093-G
	21-1095-G
	21-1097-G
	21-1195-G
	21-1197-G

ITEM NO.	PART NO.	DESCRIPTION	ITEM NO.	PART NO.	DESCRIPTION
1	See Air Cap Chart	Air Cap Retaining Ring**	16	60-206	Needle Return Spring (HD)*
2	See Air Cap Chart	Air Cap**	17	60-201	Rear Bushing
3	See Air Cap Chart	Fluid Nozzle Tip**	18	60-119	Seal*
4	31-1201	Fluid Nozzle Body	19	60-1520	Air Valve Assembly
5	60-L11H	Nozzle Carrier	20	60-302	Air Valve Poppet
6	60-12H	Air Cap Adapter	21	60-125	O-Ring*
7	60-131	O-Ring*	22	61-1003	Air Valve Spring*
8	60-124	Fluid Inlet Seal	23	60-1400	Needle Seal Cartridge*
9	60-128	Locknut	24	60-2101	Trigger
10	60-126	Fluid Inlet Fitting	25	60-1510	Air Control
11	60-1116	Panther Gun Body HVLP	25A	60-122	Plug (optional)
12	See Air Cap Chart	Fan Control Assembly**	26	60-104	Air Inlet Fitting
13	See Air Cap Chart	Fluid Needle**	27	60-1033	Trigger Pivot Set
14	60-202	Fluid Control Knob	28	98-0109	Allen Plug
15	60-209	Spring Seat*			

\*\*See air cap selection chart on page 1

\*Indicates part included in repair kit # 10-110

# FLUID NOZZLE / AIR CAP SELECTION CHARTS

## PANTHER Series 100H - Pressure Feed Guns

### P100H HVLP SPRAY GUN

MATERIAL TYPE	FLUID ORIFICE x AIR CAP	MAXIMUM PATTERN WIDTH	PRESS. / SIPHON
<b>Very Thin</b> less than 16 sec. Zahn #2 inks , dyes, solvents, stains	0.5, 0.8 mm x 1090	10	P
	0.5, 0.8 mm x 1092	11	P
<b>Thin</b> 16 to 20 sec. Zahn #2 lacquers, enamels, primers, sealers	1.0, 1.2 mm x 1092	11	P
	1.0, 1.2 mm x 1093	12	P
<b>Medium</b> 21 to 30 sec. Zahn #2 automotive base coat enamels, primers epoxies, urethanes automotive clear coat	1.3, 1.4, 1.5 mm x 1093	12	P
	1.3, 1.4, 1.5 mm x 1095	12	P
	1.3, 1.4, 1.5 mm x 1097	13	P
<b>Heavy</b> over 30 sec. Zahn #2 heavy body primers high solid enamels high solid automotive coatings adhesives	1.6, 1.7 mm x 1095	12	P
	1.6, 1.7 mm x 1097	13	P
	1.6, 1.7 mm x 1195	13	P
	1.6, 1.7 mm x 1197	14	P