



# CA Tech AutoCat A100H Spray Gun



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#### HVLP AIR CAP AND FLUID NOZZLE CHART

MODEL NO.	AIR CAPS	Press / Siphon	*MAX GUN INLET PRESS. FOR HVLP	FAN CONTROL ORIFICE	SCFM @ MAX GUN INLET	AIR CAP RING	AVAILABLE FLUID NOZZLES TIPS	NEEDLES / marking on needle	
	21-1090	pressure	15	60-616	6	21-1001	31-0205 0.5mm (.020")		
	21-1091	pressure	15		8		31-0208 0.8mm (.022")	40-A100 (100)	
A100H	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")		
AIUUN	21-1097	pressure	50		22.5		31-0215 1.5mm (.059")		
	21-1195	pressure	50		22.5	included	31-0216 1.6mm (.063")		
	21-1197	pressure	50		22.5	Included	31-0217 1.7mm (.070")		
							31-0412 1.2Fmm (.046")	40-A112F (112F)	
							31-0414 1.4Fmm (.055")	40-A114F (114F)	
							31-0417 1.7Fmm (.070")	40-A117F (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



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### Operation and Maintenance Instructions for A100H Spray Guns

#### **Gun Mounting**

A 1/2" dia. x 5" lg. rod is provided for mounting. The gun can be mounted from the left or right side or from the bottom. Thread the mounting rod (9) into one of the three holes that best suit the mounting location for the application. Tighten the locknut (10) to secure the gun in the position desired. Do not plug the remaining holes as they are used as drain holes in the event of a needle seal leak.

#### **Operation: Connections and Adjustments**

The automatic gun requires two separate regulated air supply lines.

- 1. Connect one air line to the fitting marked "CYL", this actuates the gun on and off and is usually connected through an air solenoid.
- 2. Connect the second air line to the fitting marked "ATM", this provides atomizing and fan air.
- 3. Connect a pressurized fluid supply to the gun fluid inlet.
- 4. 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".
- 5. Fan width can be adjusted using the fan control knob. Turning the knob clockwise narrows the fan.

#### Maintenance: Needle Seal Replacement

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

Before beginning needle seal replacement, it is recommended kit no. 10-107 be on hand.

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

- 1. Remove fluid control knob (36), needle return spring (34), and needle assembly (33).
- 2. Remove end cap (32) and piston return spring (31).
- 3. Piston (29) can be removed with pliers by carefully gripping the hub on the rear of the piston.
- 4. Remove the air control spool (22) using an 11/16" socket to unscrew it from the body.
- 5. The needle seal can be removed using a 7/16" socket with a short extension. Install a new needle seal and torque to approx. 2 ft.-lbs.
- 6. It is recommended that the o-rings on the air control spool (22) and piston (29) be replaced and lubricated before reassembling the gun.

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

#### Gun head disassembly and reassembly instructions:

Have repair kit # 10-107 available before gun disassembly.

#### Gun head disassembly

To remove the nozzle carrier (6) and air cap adapter (7):

- 1. Remove the air cap (1 & 2), fluid nozzle tip (3), fluid nozzle body (4), and needle (33).
- 2. Remove the needle seal cartridge (18) as described above.
- 3. Loosen the locknut (26) using 11/16" wrench and remove fluid inlet (27) using a 5/8" open-end wrench.
- 4. The nozzle carrier (6) and air cap adapter (7) will now slide forward from the gun body (11).

#### Gun head reassembly

- 1. Install a new o-ring (8) on the air cap adapter (7).
- 2. Install the thread locknut (26) onto the fluid inlet (27) as far as possible.
- 3. Install a new fluid inlet seal (25) into the recess area on the nozzle carrier (6) inlet port.
- 4. Slide the nozzle carrier (6) into air cap adapter (7) and insert into the gun body (11) as far as possible. Be sure the nozzle carrier (6) extends into the hole at the back of the gun head. Install the needle seal (18) but do not tighten.
- 5. Rotate the nozzle carrier (6) until the fluid inlet port in the nozzle carrier (6) is aligned with the threaded hole in the body. While in this position, insert the fluid inlet (27) and tighten firmly.
- 6. Tighten the needle seal (18) to approx. 12 ft.-lb. torque.
- 7. Tighten the fluid inlet (27) to approx. 25 ft.-lb. torque.
- 8. Tighten the locknut (26) to approx. 33 ft.-lb. torque.

1 2 3 4 7 8   1 2 3 4 7 8   1 2 1 6 7 8   9 10 14 15 16   9 12 10 13 12 23   1 1 10 10 10 23   1 1 10 10 10 23   1 1 10 10 10 23   26 25 10 30 31 32   1 26 20 30 31 32   25 20 20 33 35   1 26 20 33 35   20 28 20 34 35								
	Systems	27 <sup>23</sup> 23 <sup>*</sup> / 29		- Dr 1	34)			
ITEM NO.	Systems PART NO.		ITEM NO.	PART NO.	DESCRIPTION			
<b>ITEM NO</b> .		29	<b>ITEM NO.</b> 20	<b>PART NO.</b> 98-8006	DESCRIPTION O-Ring (Teflon)*			
	PART NO.	29 DESCRIPTION						
1	PART NO. See Air Cap Chart	DESCRIPTION Air Cap Ring**	20	98-8006	O-Ring (Teflon)*			
1 2	PART NO. See Air Cap Chart See Air Cap Chart	29 DESCRIPTION Air Cap Ring** Air Cap**	20 21	98-8006 98-7006	O-Ring (Teflon)* O-Ring (Viton) 2 Required*			
1 2 3 4	PART NO. See Air Cap Chart See Air Cap Chart See Air Cap Chart	DESCRIPTION Air Cap Ring** Air Cap** Fluid Tip** Fluid Nozzle Body Nozzle Body Carrier (Standard)	20 21 22	98-8006 98-7006 60-603	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool			
1 2 3	PART NO. See Air Cap Chart See Air Cap Chart See Air Cap Chart 31-1201 60-L11H 60-A11H-R	DESCRIPTION Air Cap Ring** Air Cap** Fluid Tip** Fluid Nozzle Body	20 21 22 23	98-8006     98-7006     60-603     98-7014     98-7027     60-124	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required*			
1 2 3 4	PART NO. See Air Cap Chart See Air Cap Chart See Air Cap Chart 31-1201 60-L11H 60-A11H-R 60-12H	DESCRIPTION     Air Cap Ring**     Air Cap**     Fluid Tip**     Fluid Nozzle Body     Nozzle Body Carrier (Standard)     Nozzle Body Carrier (Recirculating)     Air Cap Adapter	20 21 22 23 24 25 26	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required*			
1 2 3 4 6	PART NO. See Air Cap Chart See Air Cap Chart See Air Cap Chart 31-1201 60-L11H 60-A11H-R 60-12H 60-131	DESCRIPTION Air Cap Ring** Air Cap** Fluid Tip** Fluid Tip** Fluid Nozzle Body Nozzle Body Carrier (Standard) Nozzle Body Carrier (Recirculating) Air Cap Adapter O-Ring (Teflon)*	20 21 22 23 24 25	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128     60-126	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required* Seal* Locknut Fluid Inlet			
1 2 3 4 6 7	PART NO. See Air Cap Chart See Air Cap Chart See Air Cap Chart 31-1201 60-L11H 60-A11H-R 60-12H	DESCRIPTION     Air Cap Ring**     Air Cap**     Fluid Tip**     Fluid Nozzle Body     Nozzle Body Carrier (Standard)     Nozzle Body Carrier (Recirculating)     Air Cap Adapter	20 21 22 23 24 25 26	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required* Seal* Locknut			
1 2 3 4 6 7 8	PART NO.See Air Cap ChartSee Air Cap Chart31-120160-L11H60-A11H-R60-12H60-13160-61498-0115	DESCRIPTION     Air Cap Ring**     Air Cap**     Fluid Tip**     Fluid Nozzle Body     Nozzle Body Carrier (Standard)     Nozzle Body Carrier (Recirculating)     Air Cap Adapter     O-Ring (Teflon)*     Mounting Rod     Locknut (3/8-16)	20 21 22 23 24 25 26 27 28 29	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128     60-126     98-8010     60-602	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required* Seal* Locknut Fluid Inlet O-Ring (Teflon)* Piston			
1 2 3 4 6 7 8 9	PART NO.See Air Cap ChartSee Air Cap ChartSee Air Cap Chart31-120160-L11H60-A11H-R60-12H60-13160-61498-011560-621	DESCRIPTION Air Cap Ring** Air Cap** Fluid Tip** Fluid Nozzle Body Nozzle Body Carrier (Standard) Nozzle Body Carrier (Recirculating) Air Cap Adapter O-Ring (Teflon)* Mounting Rod	20 21 22 23 24 25 26 27 28 29 30	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128     60-126     98-8010     60-602     98-7217	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required* Seal* Locknut Fluid Inlet O-Ring (Teflon)*			
1 2 3 4 6 7 8 9 10	PART NO.       See Air Cap Chart       See Air Cap Chart       See Air Cap Chart       31-1201       60-L11H       60-A11H-R       60-12H       60-131       60-614       98-0115       60-136	DESCRIPTION     Air Cap Ring**     Air Cap**     Fluid Tip**     Fluid Nozzle Body     Nozzle Body Carrier (Standard)     Nozzle Body Carrier (Recirculating)     Air Cap Adapter     O-Ring (Teflon)*     Mounting Rod     Locknut (3/8-16)     AutoCAT Gun Body HVLP     Plug	20 21 22 23 24 25 26 27 28 29	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128     60-126     98-8010     60-602     98-7217     66-246	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required* Seal* Locknut Fluid Inlet O-Ring (Teflon)* Piston			
1 2 3 4 6 7 8 9 10 11	PART NO.See Air Cap ChartSee Air Cap ChartSee Air Cap Chart31-120160-L11H60-A11H-R60-12H60-13160-61498-011560-621	DESCRIPTION     Air Cap Ring**     Air Cap**     Fluid Tip**     Fluid Nozzle Body     Nozzle Body Carrier (Standard)     Nozzle Body Carrier (Recirculating)     Air Cap Adapter     O-Ring (Teflon)*     Mounting Rod     Locknut (3/8-16)     AutoCAT Gun Body HVLP	20 21 22 23 24 25 26 27 28 29 30	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128     60-126     98-8010     60-602     98-7217	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required* Seal* Locknut Fluid Inlet O-Ring (Teflon)* Piston O-Ring (Viton)*			
1 2 3 4 6 7 8 9 10 11 11 12	PART NO.       See Air Cap Chart       See Air Cap Chart       See Air Cap Chart       31-1201       60-L11H       60-A11H-R       60-12H       60-614       98-0115       60-136       98-8108       98-0108	DESCRIPTION     Air Cap Ring**     Air Cap**     Fluid Tip**     Fluid Nozzle Body     Nozzle Body Carrier (Standard)     Nozzle Body Carrier (Recirculating)     Air Cap Adapter     O-Ring (Teflon)*     Mounting Rod     Locknut (3/8-16)     AutoCAT Gun Body HVLP     Plug     O-Ring (Teflon)*	20 21 22 23 24 25 26 27 28 29 30 31 31 32 33	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128     60-126     98-8010     60-602     98-7217     66-246     60-601     See Air Cap Chart	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required* Seal* Locknut Fluid Inlet O-Ring (Teflon)* Piston O-Ring (Viton)* Piston Return Spring End Cap Needle Assembly			
1 2 3 4 6 7 8 9 10 11 11 12 13	PART NO.       See Air Cap Chart       See Air Cap Chart       See Air Cap Chart       31-1201       60-L11H       60-A11H-R       60-12H       60-614       98-0115       60-136       98-8108	DESCRIPTION Air Cap Ring** Air Cap** Fluid Tip** Fluid Tip** Fluid Nozzle Body Nozzle Body Carrier (Standard) Nozzle Body Carrier (Recirculating) Air Cap Adapter O-Ring (Teflon)* Mounting Rod Locknut (3/8-16) AutoCAT Gun Body HVLP Plug O-Ring (Teflon)*	20 21 22 23 24 25 26 27 28 29 30 31 32	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128     60-126     98-8010     60-602     98-7217     66-246     60-601     See Air Cap Chart     60-613	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required* Seal* Locknut Fluid Inlet O-Ring (Teflon)* Piston O-Ring (Viton)* Piston Return Spring End Cap			
1 2 3 4 6 7 8 9 10 11 12 13 14	PART NO.       See Air Cap Chart       See Air Cap Chart       See Air Cap Chart       31-1201       60-L11H       60-A11H-R       60-12H       60-614       98-0115       60-136       98-8108       98-0108	DESCRIPTION     Air Cap Ring**     Air Cap**     Fluid Tip**     Fluid Nozzle Body     Nozzle Body Carrier (Standard)     Nozzle Body Carrier (Recirculating)     Air Cap Adapter     O-Ring (Teflon)*     Mounting Rod     Locknut (3/8-16)     AutoCAT Gun Body HVLP     Plug     O-Ring (Teflon)*	20 21 22 23 24 25 26 27 28 29 30 31 31 32 33	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128     60-126     98-8010     60-602     98-7217     66-246     60-601     See Air Cap Chart     60-613     60-612	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required* Seal* Locknut Fluid Inlet O-Ring (Teflon)* Piston O-Ring (Viton)* Piston Return Spring End Cap Needle Assembly			
1 2 3 4 6 7 8 9 10 11 12 13 14 15	PART NO.       See Air Cap Chart       See Air Cap Chart       See Air Cap Chart       31-1201       60-L11H       60-A11H-R       60-12H       60-614       98-0115       60-136       98-8108       98-0108       60-605       60-606       See Air Cap Chart	DESCRIPTION      Air Cap Ring**     Air Cap**     Fluid Tip**     Fluid Nozzle Body     Nozzle Body Carrier (Standard)     Nozzle Body Carrier (Recirculating)     Air Cap Adapter     O-Ring (Teflon)*     Mounting Rod     Locknut (3/8-16)     AutoCAT Gun Body HVLP     Plug     O-Ring (Teflon)*     Circlip     Fan Control Housing	20 21 22 23 24 25 26 27 28 29 30 31 31 32 33 34	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128     60-126     98-8010     60-602     98-7217     66-246     60-601     See Air Cap Chart     60-612     60-612     60-608	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required* Seal* Locknut Fluid Inlet O-Ring (Teflon)* Piston O-Ring (Viton)* Piston Return Spring End Cap Needle Assembly Needle Return Spring Locknut - Fluid Control Knob Fluid Control Knob			
1 2 3 4 6 7 8 9 10 11 12 13 14 15 16	PART NO.       See Air Cap Chart       See Air Cap Chart       See Air Cap Chart       31-1201       60-L11H       60-A11H-R       60-12H       60-614       98-0115       60-621       60-136       98-8108       98-0108       60-606	DESCRIPTIONAir Cap Ring**Air Cap**Fluid Tip**Fluid Tip**Fluid Nozzle BodyNozzle Body Carrier (Standard)Nozzle Body Carrier (Recirculating)Air Cap AdapterO-Ring (Teflon)*Mounting RodLocknut (3/8-16)AutoCAT Gun Body HVLPPlugO-Ring (Teflon)*CirclipFan Control HousingFan Control Stem	20 21 22 23 24 25 26 27 28 29 30 31 31 32 33 34 35	98-8006     98-7006     60-603     98-7014     98-7027     60-124     60-128     60-126     98-8010     60-602     98-7217     66-246     60-601     See Air Cap Chart     60-613     60-612	O-Ring (Teflon)* O-Ring (Viton) 2 Required* Air Control Spool O-Ring (Viton) 2 Required* O-Ring (Viton) 2 Required* Seal* Locknut Fluid Inlet O-Ring (Teflon)* Piston O-Ring (Viton)* Piston Return Spring End Cap Needle Assembly Needle Return Spring Locknut - Fluid Control Knob			

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

\*\*\*Air inlet fittings are available in 90 degree elbow . 90 degree elbow tubing "push on" style fittings

P/N 53-520 1/8 NPT x 1/4" OD Tube

P/N 53-521 1/4 NPT x 3/8" OD Tube

Recirculating setups require: Item 6 (recirculating) & items 25, 26, 27 in place of item 12

## FLUID NOZZLE / AIR CAP SELECTION CHARTS AUTOCAT Series 100H - Pressure Feed Guns

#### A100H HVLP AUTOMATIC SPRAY GUN

MATERIAL TYPE	FLUID ORIFICE X AIR CAP	MAXIMUM PATTERN WDTH	PRESS. / SIPHON
		PALLERN WIDTH	
Very Thin		10	5
less than 16 sec. Zahn #2	0.5, 0.8 mm x 1090	10	Р
inks , dyes,	0.5, 0.8 mm x 1092	11	Р
solvents, stains			
Thin			
16 to 20 sec. Zahn #2	1.0, 1.2 mm x 1092	11	Р
lacquers, enamels,	1.0, 1.2 mm x 1093	12	Р
primers, sealers			
Medium			
21 to 30 sec. Zahn #2	1 2 1 4 1 5 mm x 1002	12	Р
automotive base coat	1.3, 1.4, 1.5 mm x 1093	12	-
enamels, primers	1.3, 1.4, 1.5 mm x 1095	12	Р
epoxies, urethanes	1.3, 1.4, 1.5 mm x 1097	13	Р
automotive clear coat			
Heavy			
over 30 sec. Zahn #2	1.6, 1.7 mm x 1095	12	Р
heavy body primers	1.6, 1.7 mm x 1097	13	Р
high solid enamels	1.6, 1.7 mm x 1195	13	Р
high solid automotive coatings	1.6, 1.7 mm x 1197	14	Р
adhesives			