

**AUTOMATIC SPRAY GUN  
PRODUCT INFORMATION**

**HVLP AIR CAP AND FLUID NOZZLE CHART**

MODEL NO.	AIR CAPS	*MAX GUN INLET PRESS. FOR HVLP	FAN CONTROL ORIFICE	SCFM	AIR CAP RING	AVAILABLE FLUID NOZZLES TIPS	NEEDLES / marking on needle
A100H	21-1090	15	60-616	6	21-1001	31-0205 0.5mm (.020")	40-A100 (100)
	21-1091	15		8		31-0208 0.8mm (.022")	
	21-1092	15		8		31-0210 1.0mm (.040")	
	21-1093	18		10		31-0212 1.2mm (.046")	
	21-1094	33		13		31-0213 1.3mm (.052")	
	21-1095	50		22.5		31-0214 1.4mm (.055")	
	21-1097	50		22.5		31-0215 1.5mm (.059")	
	21-1195	50		22.5	31-0216 1.6mm (.063")	included	
A200H	22-1028	29	60-615	18	22-1001	32-0611 1.1mm (.042")	40-A211 (211)
	22-1033	38		18.75		32-0614 1.4mm (.055")	40-A214 (214)
	22-1057	50		22		32-0618 1.8mm (.070")	40-A218 (218)
	22-1100	37		18		32-0622 2.2mm (.086")	40-A222 (222)
	22-1046**	47	60-615	22.5	22-1001	32-0211 1.1mm (.042")	40-A211 (211)
	22-1083**	55		26		32-0214 1.4mm (.055")	40-A214 (214)
A300H	23-1008	40*	60-617	13.5	included	33-0208 0.8mm (.022")	40-A308 (308)
	23-1010	40*		13.5		33-0210 1.0mm (.040")	40-A310 (310)
	23-1012	40*		13.5		33-0212 1.2mm (.046")	40-A312 (312)
	23-1013	40*		13.5		33-0213 1.3mm (.052")	40-A313 (313)
	23-1014	40*		13.5		33-0214 1.4mm (.055")	40-A314 (314)
	23-1015	40*		13.5		33-0215 1.5mm (.059")	40-A315 (315)
	23-1017	40*		13.5		33-0217 1.7mm (.070")	40-A317 (317)
	23-1019	40*		13.5		33-0219 1.9mm (.075")	40-A319 (319)
	23-1022	40*		13.5		33-0222 2.2mm (.086")	40-A322 (322)

\*Note: Air cap test gages are available to confirm HVLP compliance.

\*\*Must be used with 32-02XX fluid nozzle tips.

**CONVENTIONAL AIR CAP AND FLUID NOZZLE CHART**

MODEL NO.	AIR CAPS	*SUGGESTED GUN INLET PRESS.	FAN CONTROL ORIFICE	SCFM	AIR CAP RING	AVAILABLE FLUID NOZZLES TIPS	NEEDLES / marking on needle			
A100C	21-2163	50	none	8	included	31-0606 0.6mm (.022")	40-A107 (107)			
	21-2263	50		14				31-0610 1.0mm (.040")	40-A110 (110)	
	21-2263-E	50		15						
	21-2363	50		13.6		5	31-0612 1.2mm (.046")	40-A115 (115)		
	21-2166	50		5						
	21-2266	50		12		16.2	31-0613 1.3mm (.052")	40-A122 (122)		
	21-2266-3	50		12						
	21-2366	50		12		14.5	31-0615 1.5mm (.059")	40-A128 (128)		
	21-2466	50		15						
	21-2167	50		14.5		15	31-0618 1.8mm (.070")	40-A128 (128)		
	21-2267	50		15						
21-2168	50	14	14							
A200C	22-2030	50	none	12	included					
	22-2058	40		6						
	22-2080	60		14				22-1001	32-0611 1.1mm (.042")	40-A211 (211)
	22-2064	80		22					32-0614 1.4mm (.055")	40-A214 (214)
	22-2704	70		21	32-0618 1.8mm (.070")	40-A218 (218)				
	22-2765	80		22	23	32-0818 1.8mm (.070")	40-A222 (222)			
	22-2777	70		21						
	22-2797	70		21	15	included				
	22-2880	60		15						
	22-2900	45		12	12	22-1001				
A300C	23-2010	45-55	none	9-10.7	23-0201 (included)	33-0608 0.8mm (.022")	40-A308 (308)			
	23-2013	45-55		9-10.7		33-0610 1.0mm (.040")	40-A310 (310)			
	23-2014	45-55		9-10.7		33-0613 1.3mm (.052")	40-A313 (313)			
	23-2016	45-55		9-10.7		33-0614 1.4mm (.055")	40-A314 (314)			
						33-0615 1.5mm (.059")	40-A315 (315)			

Actual fluid nozzle and air cap combinations are determined by application (see application chart page 4)

# Operation and Maintenance Instructions for *AutoCAT* Automatic 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 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

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 (34), needle return spring (32), and needle assembly (31).
2. Remove end cap (30) and piston return spring (29).
3. Piston (27) can be removed with pliers by carefully gripping the hub on the rear of the piston.
4. Remove the air control spool (21) 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 (21) and piston (27) be replaced and lubricated before reassembling the gun.

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

### Gun head disassembly

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

1. Remove the air cap (2), fluid nozzle tip (3), fluid nozzle body (4), and needle (31).
2. Remove the needle seal cartridge (17) as described above.
3. Loosen the locknut (24) using an 11/16" wrench and remove fluid inlet (25) using a 5/8" wrench.
4. The nozzle carrier and air cap adapter will now slide forward from the gun body (11).

### Gun head reassembly

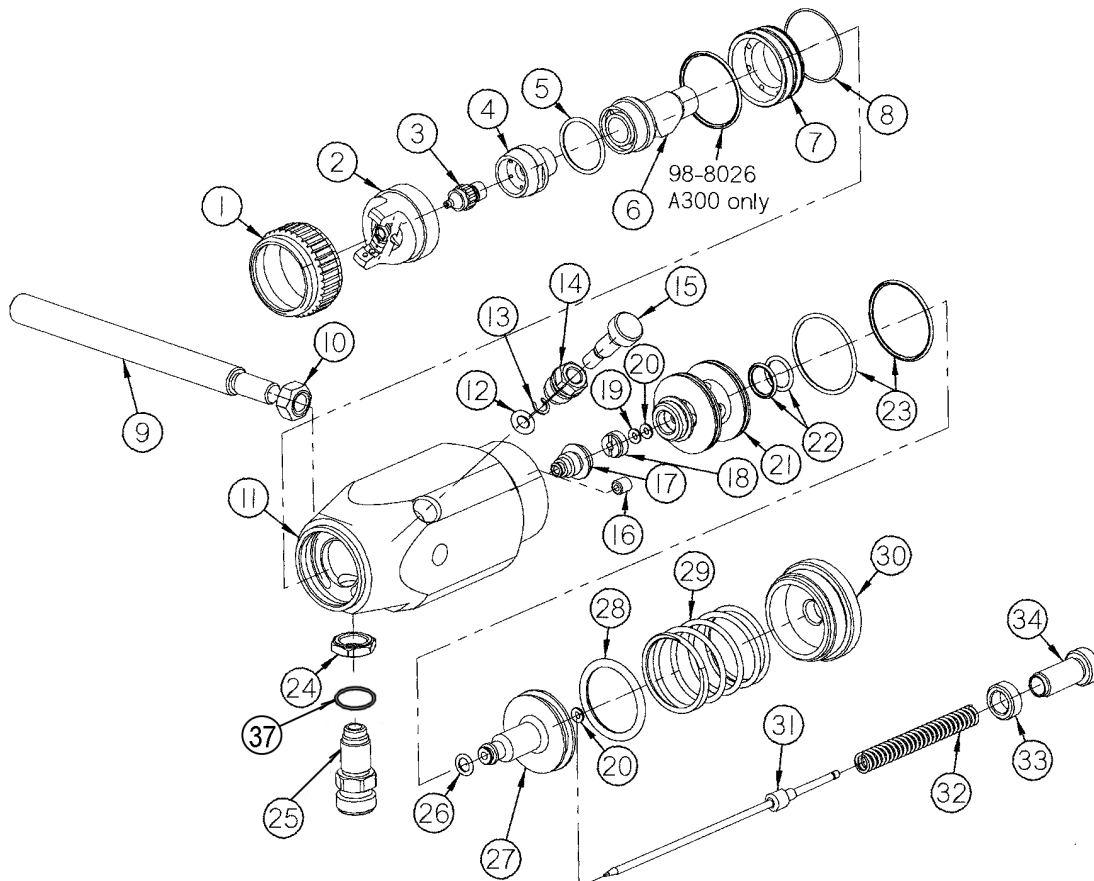
1. Install a new o-ring (8) on the air cap adapter.
2. For model A300H only, install a new o-ring 98-8026 onto the air cap adapter.
3. Install the thread locknut (24) onto the fluid inlet as far as possible.
4. Slide the nozzle carrier (6) into air cap adapter (7) and insert into the gun body as far as possible. Be sure the nozzle carrier extends into the hole at the back of the gun body. Install the needle seal (17) but do not tighten.
5. Rotate the nozzle carrier until the fluid inlet port in the nozzle carrier is aligned with the threaded hole in the body. While in this position, insert the fluid inlet (25) and tighten firmly.
6. Tighten the needle seal (17) to approx. 12 ft.-lb. torque.
7. Tighten the fluid inlet (25) to approx. 25 ft.-lb. torque.
8. Tighten the locknut (24) to approx. 33 ft.-lb. torque.

ITEM NUMBER	PART NUMBER	DESCRIPTION	ITEM NUMBER	PART NUMBER	DESCRIPTION
1	See Air Cap Chart	Air Cap Ring	19	98-8006*	O-Ring (Teflon)
2	See Air Cap Chart	Air Cap	20	98-7006*	O-Ring (Viton) 2 Req'd
3	See Air Cap Chart	Fluid Nozzle Tip	21	60-603	Air Control Spool
4	See <i>AutoCAT</i> Model no.	Fluid Nozzle Body	22	98-7014*	O-Ring (Viton) 2 Req'd
5	See <i>AutoCAT</i> Model no.	Gasket*	23	98-7027*	O-Ring (Viton) 2 Req'd
6	See <i>AutoCAT</i> Model no.	Fluid Nozzle Carrier	24	60-128	Locknut - Fluid Inlet
7	See <i>AutoCAT</i> Model no.	Air Cap Adapter	25	60-126	Fluid Inlet
8	60-131*	O-Ring*	26	98-8010*	O-Ring (Teflon)
9	60-614	Mounting Rod	27	60-602	Piston
10	98-115	Locknut (3/8-16)	28	98-7217*	O-Ring (Viton)
11	60-621	<i>AutoCAT</i> Gun body HVLP	29	66-246	Piston Return Spring
	60-622	<i>AutoCAT</i> Gun body CONV.	30	60-601	End Cap
12	98-8108*	O-Ring (Teflon)	31	See Air Cap Chart	Needle Assembly
13	98-108*	Circlip	32	60-613	Needle Return Spring
14	60-605	Fan Control Housing	33	60-612	Locknut - Fluid Control Knob
15	60-606	Fan Control Stem	34	60-608	Fluid Control Knob
16	See <i>AutoCAT</i> Model no.	Orifice	35	53-551** (not shown)	Cylinder Air Fitting 1/8NPT x 1/4NPS
17	60-1400*	Needle Seal Assembly	36	53-552** (not shown)	Atomz. Air Fitting 1/4NPT x 1/4NPT
18	60-604	Seal Cap	37	60-124	Fluid Inlet Seal

<i>AutoCAT</i> MODEL NO.	ITEM 4	ITEM 5	ITEM 6	ITEM 7	ITEM 16
A100C	31-2201	61-1005*	60-L11C	60-12C	Not Used
A100H	31-1201	Not Used	60-L11H	60-12H	60-616
A200C	32-2201	98-8020*	60-L21C	60-22	Not Used
A200H	32-1201	98-8020*	60-L21H	60-22	60-615
A300C	33-2201	98-8024*	60-L31C	60-32C	Not Used
A300H	33-1201	Not Used	60-L31H	60-34H	60-617

\*Included in KIT NO. 10-107

\*\*Air inlet fittings are available in 90 degree elbow 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



# FLUID NOZZLE / AIR CAP SELECTION CHARTS

## *AutoCAT* - Automatic Spray Guns

HVLP	A100H		A200H		A300H	
MATERIAL TYPE	FLUID ORIFICE x AIR CAP	MAXIMUM PATTERN WIDTH	FLUID ORIFICE x AIR CAP	MAXIMUM PATTERN WIDTH	FLUID ORIFICE x AIR CAP	MAXIMUM PATTERN WIDTH
<b>Very Thin</b> less than 16 sec. Zahn #2 inks , dyes, solvents, stains	0.5, 0.8 mm x 1090	10	1.1 mm x 1028	11	1.0 mm x 1010	12
	0.5, 0.8 mm x 1092	11	1.1 mm x 1033	9		
<b>Thin</b> 16 to 20 sec. Zahn #2 lacquers, enamels, primers, sealers	1.0, 1.2 mm x 1092	11	1.1, 1.4 mm x 1057	11	1.0 mm x 1010	12
	1.0, 1.2 mm x 1093	12	1.1, 1.4 mm x 1100	12	1.3 mm x 1013	12
<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	1.4 mm x 1057	11	1.3 mm x 1013	12
	1.3, 1.4, 1.5 mm x 1095	12	1.4 mm x 1100	12	1.5 mm x 1015	12
	1.3, 1.4, 1.5 mm x 1097	13	1.4 mm x 1046	11	1.7 mm x 1017	12
			1.4 mm x 1083	13		
<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			1.5 mm x 1015	12
	1.6, 1.7 mm x 1097	13	1.8, 2.2 mm x 1046	11	1.7 mm x 1017	12
	1.6, 1.7 mm x 1195	13	1.8, 2.2 mm x 1083	13	1.9 mm x 1019	12
	1.6, 1.7 mm x 1197	14			2.2 mm x 1022	12

CONVENTIONAL	A100C		A200C		A300C	
MATERIAL TYPE	FLUID ORIFICE x AIR CAP	MAXIMUM PATTERN WIDTH	FLUID ORIFICE x AIR CAP	MAXIMUM PATTERN WIDTH	FLUID ORIFICE x AIR CAP	MAXIMUM PATTERN WIDTH
<b>Very Thin</b> less than 16 sec. Zahn #2 inks , dyes, solvents, stains	0.6, 0.7 mm x 2163	8	1.1 mm x 2058	9	0.8 mm x 2010	12
	0.6, 0.7 mm x 2166	9	1.1 mm x 2030	10	1.0 mm x 2010	12
	0.6, 0.7 mm x 2266	12				
<b>Thin</b> 16 to 20 sec. Zahn #2 lacquers, enamels, primers, sealers	0.6, 0.7, 1.0 mm x 2163	8	1.1, 1.4 mm x 2058	9	0.8 mm x 2010	12
	0.6, 0.7, 1.0 mm x 2366	14	1.1, 1.4 mm x 2030	10	1.0 mm x 2010	12
	0.6, 0.7, 1.0 mm x 2466	13	1.1, 1.4 mm x 2900	10	1.3 mm x 2013	12
<b>Medium</b> 21 to 30 sec. Zahn #2 automotive base coat enamels, primers epoxies, urethanes automotive clear coat	1.2, 1.3, 1.5, 1.8 mm x 2263	14	1.4, 1.8 mm x 2080	13	1.3 mm x 2013 1.4 mm x 2014 1.6 mm x 2016	12 12 12
	1.2, 1.3, 1.5, 1.8 mm x 2266	10	1.4, 1.8 mm x 2704	12		
	1.2, 1.3, 1.5, 1.8 mm x 2266-3	15	1.4, 1.8 mm x 2765	15		
	1.2, 1.3, 1.5, 1.8 mm x 2466	13	1.4, 1.8 mm x 2777	14		
			1.4, 1.8 mm x 2797	17		
<b>Heavy</b> over 30 sec. Zahn #2 heavy body primers high solid enamels high solid automotive coatings adhesives	1.5, 1.8mm x 2466	13	1.4, 1.8 mm x 2900	10		
	2.2 mm x 2167	12	1.8mm x 2765	15	1.4 mm x 2014	12
	2.2 mm x 2267	15	1.8mm x 2797	17	1.6 mm x 2016	12
	2.8 mm x 2168	12	2.2 mm x 2880	13		
		2.2 mm x 2064	14			