

HVLP AIR CAP AND FLUID NOZZLE CHART

MODEL NO.	AIR CAPS	*MAX GUN INLET PRESS.(PSI) FOR HVLP	FAN CONTROL ORIFICE	SCFM @ MAX GUN INLET	AIR CAP RING	AVAILABLE FLUID NOZZLE TIPS	NEEDLES/ marking on needle
A100H	21-1090	13	60-616	6	21-1001	31-0205 0.5mm (.020") 31-0208 0.8mm (.022") 31-0210 1.0mm (.040") 31-0212 1.2mm (.046") 31-0213 1.3mm (.052") 31-0214 1.4mm (.055") 31-0215 1.5mm (.059") 31-0216 1.6mm (.063") 31-0217 1.7mm (.070")	40-A100 (100)
	21-1091	15		8	21-1001		
	21-1092	15		8	21-1001		
	21-1093	18		10	21-1001		
	21-1095	50		22.5	21-1001		
	21-1097	50		22.5	21-1001		
	21-1195	50		22.5	Included		
	21-1197	50		22.5	Included		
A200H	22-1028	29	60-1502 (#2)	18	22-1001	32-0611 1.1mm (.042")	40-A211 (211)
	22-1033	38	60-1502 (#2)	18.75	22-1001	32-0614 1.4mm (.055")	40-A215 (214)
	22-1057	50	60-1502 (#2)	22	22-1001	32-0618 1.8mm (.070")	40-A218 (218)
	22-1100	37	60-1503 (#3)	18	22-1001	32-0622 2.2mm (.086")	40-A222 (222)
	22-1046**	47	60-1502 (#2)	22.5	22-1001	32-0211 1.1mm (.042")	40-A211 (211)
	22-1083**	55	60-1501 (#1)	26	22-1001	32-0214 1.4mm (.055")	40-A214 (214)
							32-0218 1.8mm (.070")
						32-0222 2.2mm (.086")	40-A222 (222)
A300H	23-1008	40*	60-1502 (#2)	13.5	Included	33-0208 .08mm (.022")	40-A308 (308)
	23-1010	40*	60-1502 (#2)	13.5		33-0210 1.0mm (.040")	40-A310 (310)
	23-1013	40*	60-1501 (#1)	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)

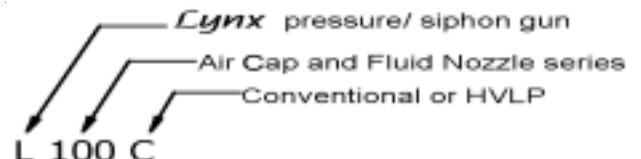
*Note: Air cap test gages are available to confirm HVLP compliance.

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

CONVENTIONAL AIR CAP AND FLUID NOZZLE CHART

MODEL NO.	AIR CAPS	*SUGGESTED GUN INLET PRESS.(PSI)	FAN CONTROL ORIFICE	SCFM	AIR CAP RING	AVAILABLE FLUID NOZZLE	NEEDLES/ marking on needle
A100C	21-2163	50	NONE	8	Included	31-0606 0.6mm (.022") 31-0607 0.7mm (.028") 31-0610 1.0mm (.040") 31-0612 1.2mm (.046") 31-0613 1.3mm (.052") 31-0615 1.5mm (.059") 31-0618 1.8mm (.070") 31-0622 2.2mm (.086") 31-0628 2.8mm (.110")	40-A107 (107) 40-A107 (107) 40-A110 (110) 40-A110 (110) 40-A110 (110) 40-A115 (115) 40-A115 (115) 40-A122 (122) 40-A128 (128)
	21-2263	50		14			
	21-2263-E	50		15			
	21-2363	50		13.6			
	21-2166	50		5			
	21-2266	50		12			
	21-2266-3	50		16.2			
	21-2366	50		12			
	21-2466	50		15			
	21-2167	50		14.5			
	21-2267	50		15			
21-2168	50	14					
A200C	22-2030	50	NONE	12	Included		
	22-2058	40		6	Included		
	22-2080	60		14	Included	32-0611 1.1mm (.042")	40-A211 (211)
	22-2064	80		22	Included	32-0614 1.4mm (.055")	40-A214 (214)
	22-2704	70		21	22-1001	32-0618 1.8mm (.070")	40-A218 (218)
	22-2765	80		22	22-1001	32-0818 1.8mm (.070")	40-A214 (214)
	22-2777	70		23	22-1001	32-0622 2.2mm (.086")	40-A218 (218)
	22-2797	70		21	22-1001		
	22-2880	60		15	Included		
22-2900	45	12	22-1001				
	23-2010	45-55	NONE	9-10.7	Included	33-0610 1.0mm (.040")	40-A310 (310)
	23-2013	45-55		9-10.7		33-0613 1.3mm (.052")	40-A313 (313)
	23-2014	45-55		9-10.7		33-0614 1.4mm (.055")	40-A314 (314)
	23-2016	45-55		9-10.7		33-0616 1.6mm (.063)	40-A315 (315)

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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.

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 (5) and air cap adapter (7):

1. Remove the air cap (2), 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 assembly

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 (5) 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. 2 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.

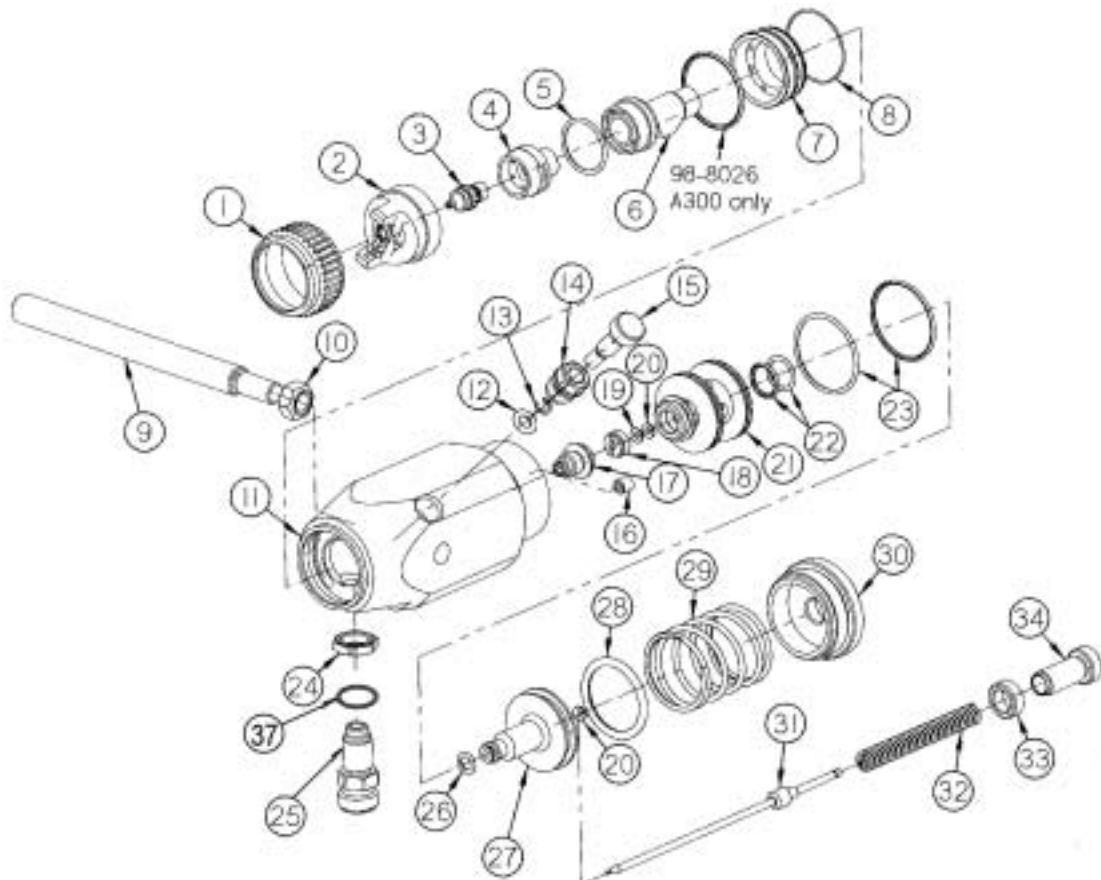
ITEM NUMBER	PART NUMBER	DESCRIPTION
1	See Air Cap Chart	Air Cap Ring
2	See Air Cap Chart	Air Cap
3	See Air Cap Chart	Fluid Nozzle Tip
4	See AutoCAT Model no.	Fluid Nozzle Body
5	See AutoCAT Model no.	Gasket
6	See AutoCAT Model no.	Fluid Nozzle Carrier
7	See AutoCAT Model no.	Air Cap Adapter
8	60-131*	O-Ring (Teflon)
9	60-614	Mounting Rod
10	98-115	Locknut (3/8-16)
11	60-621	AutoCAT Gun Body HVLP
	60-622	AutoCAT Gun Body Conv.
12	98-8108*	O-Ring (Teflon)
13	98-108*	Circlip
14	60-605	Fan Control Housing
15	60-606	Fan Control Stem
16	See AutoCAT Model no.	Orifice
17	60-1400*	Needle Seal Assembly
18	60-604	Seal Cap

ITEM NUMBER	PART NUMBER	DESCRIPTION
19	98-8006*	O-Ring (Teflon)
20	98-7006*	O-Ring (Viton) 2 Req'd
21	60-603	Air Control Spool
22	98-7014*	O-Ring (Viton) 2 Req'd
23	98-7027*	O-Ring (Viton) 2 Req'd
24	60-128	Locknut - Fluid Inlet
25	60-126	Fluid Inlet
26	98-8010*	O-Ring (Teflon)
27	60-602	Piston
28	98-7217*	O-Ring (Viton)
29	60-607	Piston Return Spring
30	60-601	End Cap
31	See Air Cap Chart	Needle Assembly
32	60-613	Needle Return Spring
33	60-612	Locknut - Fluid Control Knob
34	60-608	Fluid Control Knob
35	53-551**(not shown)	Cylinder Air Fitting 1/8NPT x 1/4NPS
36	53-552**(not shown)	Atomz. Air Fitting 1/4NPT x 1/4NPT
37	60-124	Fluid Inlet Seal

AutoCAT 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	98-1024*	60-L31C	60-32C	Not Used
A300H	33-1201	Not Used	60-L31H	60-32H	60-617

* INCULDED 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 GUN

HVLP Automatic guns

MATERIAL TYPE	A100H		A200H		A300H	
	fluid orifice x air cap	maximum pattern width	fluid orifice x air cap	maximum pattern width	fluid orifice x air cap	maximum pattern width
Very Thin less than 16 sec. Zahn #2 inks, dyes, solvents, stains	0.5, 0.8 mm x 1090 0.5, 0.8 mm x 1092	10 11	1.1 mm x 1028 1.1 mm x 1033	11 9	1.0 mm x 1010	15
Thin 16 to 20 sec. Zahn #2 lacquers, enamels, primers, sealers	1.0, 1.2 mm x 1092 1.1, 1.2 mm x 1093	11 12	1.1, 1.4 mm x 1057 1.1, 1.4 mm x 1100	11 12	1.0 mm x 1010 1.3 mm x 1013	15 15
Medium 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 1.3, 1.4, 1.5 mm x 1095 1.3, 1.4, 1.5 mm x 1097	12 12 13	1.4 mm x 1057 1.4 mm x 1100 1.4 mm x 1046 1.4 mm x 1083	11 12 11 13	1.3 mm x 1013 1.5 mm x 1015 1.7 mm x 1017	15 15 15
Heavy over 30 sec. Zahn #2 heavy body primers high solid enamels high solid automotive coatings adhesives	1.6, 1.7 mm x 1095 1.6, 1.7 mm x 1097 1.6, 1.7 mm x 1195 1.6, 1.7 mm x 1197	12 13 13 14	1.8, 2.2 mm x 1046 1.8, 2.2 mm x 1083	11 13	1.5 mm x 1015 1.7 mm x 1017 1.9 mm x 1019 2.2 mm x 1022	15 15 15 15

CONVENTIONAL Automatic guns

MATERIAL TYPE	A100C		A200C		A300C	
	fluid orifice x air cap	maximum pattern width	fluid orifice x air cap	maximum pattern width	fluid orifice x air cap	maximum pattern width
Very Thin less than 16 sec. Zahn #2 inks, dyes, solvents, stains	0.6, 0.7 mm x 2163 0.6, 0.7 mm x 2166 0.6, 0.7 mm x 2266	8 9 12	1.1mm x 2058 1.1mm x 2030	9 10	0.8mm x 2013 1.0 mm x 2013	12 12
Thin 16 to 20 sec. Zahn #2 lacquers, enamels, primers, sealers	0.6, 0.7, 1.0 mm x 2163 0.6, 0.7, 1.0 mm x 2366 0.6, 0.7, 1.0 mm x 2466	8 14 13	1.1, 1.4 mm x 2058 1.1, 1.4 mm x 2030 1.1, 1.4 mm x 2900	9 10 10	0.8mm x 2013 1.0 mm x 2013 1.3 mm x 2013	12 12 12
Medium 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 1.2, 1.3, 1.5, 1.8 mm x 2266 1.2, 1.3, 1.5, 1.8 mm x 2266-3 1.2, 1.3, 1.5, 1.8 mm x 2466	14 10 15 13	1.4, 1.8 mm x 2080 1.4, 1.8 mm x 2704 1.4, 1.8 mm x 2765 1.4, 1.8 mm x 2777 1.4, 1.8 mm x 2797 1.4, 1.8 mm x 2900	13 12 15 14 17 10	1.3 mm x 2013 1.4 mm x 2014 1.6 mm x 2016	12 12 12
Heavy over 30 sec. Zahn #2 heavy body primers high solid enamels high solid automotive coatings adhesives	1.5, 1.8mm x 2466 2.2mm x 2167 2.2mm x 2267 2.8mm x 2168	13 12 15 12	1.8mm x 765 1.8mm x 797 2.2 mm x 2880 2.2 mm x 2064	15 17 13 14	1.4 mm x 2014 1.6 mm x 2016	12 12