

# Instruction Manual

ASURA AUTO GUN

FMC-100

FAMCO CO., LTD

## -Forward-

This Operation Manual is for ASURA AUTO GUN (Part No. FMC-100). Please read this manual thoroughly, and operate it with understanding of contents.

Also keeping this manual on hand while using is recommended.

### 1. SPECIFICATIONS

Part No.	FMC-100
Atomizing air supply	Hose Inlet 10-8mm”(diameter)
Paint ON/OFF air supply	Connection inlet RC1/8”(diameter)
Paint supply	Hose Inlet G1/4”
Weight	Body approx. 1.53ld(700g)
Maximum air pressure	0.5Mpa
Maximum paint pressure	15Mpa
Piston air pressure	0.5Mpa

### 2. WARNING

- 1) Never point the nozzle of spray gun at human body. (Injection from the gun nozzle has high paint pressure, which can cause penetration of the skin and serious injuries.)
- 2) Always shut off pump, release fluid pressure of gun, hose, and pump, and make sure scale on the pressure gauge is pointing zero before installing and uninstalling paint hose.
- 3) Operate spray gun under the proper fluid pressure less than 15Mpa.
- 4) Spray gun, hose and pump **MUST BE GROUNDED** before operating the airless spray system to avoid ignition to solvent due to static electricity originated from high speed spray.
- 5) Operate spray gun and pump under the lowest pressure when cleaning spray gun, hose and pump with thinner to keep operator safe.(Pump air pressure 0.05Mpa)

### 3. INSTALLATION AND OPERATING

- 1) Connect paint hose fittings to inlet of paint (25) securely.  
Connect air hose fittings to inlet of atomizing air (31) securely.  
Control atomizing air with Two Directions Auto Valve.  
Use Three Directions Auto Valve or Five Directions Auto Valve to control the air to turn ON/OFF gun. (Refer to installation circuit diagram)
- 2) Install Combi Nozzle packing (5), Air Combi Nozzle (4), Air Orifice (3), and Cap Bushing (2) respectively to spray gun point and tighten Cap Hand E (1) securely.
- 3) Set up fluid pressure in the lowest pressure according to each liquid or paint.  
The lowest pressure which eliminates paint tail from the nozzle is the best for atomizing air.  
(Increase air pressure gradually from 0 PSI with adjusting regulator.)  
\*Consult with a dealer in case that paint tail does not eliminate by using special material.
- 4) After use, Remove them up to Combi Nozzle Packing (5) from spray gun when you cleanse inside of the gun with thinner. Running the pump by low pressure, and circulate thinner into the spray gun. Especially cleanse Air Combi Nozzle (4) thoroughly.  
Clogging might cause improper painting result.  
\*Refer to instruction for cleansing, Cleansing Validation on page 5.

# <ASURA AUTO GUN>

## MAINTENANCE

### A. Overhaul

Release fluid pressure in the entire system, disconnect hose, and remove spray gun from device before overhauling spray gun.

Process	Method of Overhaul	Caution
Displace Air Combi Nozzle (4)	<ol style="list-style-type: none"> <li>1. Direct Auto gun into nozzle side.</li> <li>2. Loosen Cap Hand E (1) counterclockwise and take off.</li> <li>3. Take off Cap Bushing (2).</li> <li>4. Take off Air Orifice S (3) and Air Combi Nozzle(4) at same time.</li> </ol>	→Do not drop nozzle.
Displace Piston Spring (20)	<ol style="list-style-type: none"> <li>1. Direct Auto Gun into nozzle side.</li> <li>2. Loosen Cap Screw (23) with hexagon wrench counterclockwise to take off while holding down the Exhaust Body F (21) with Thumb.</li> <li>3. Take off in order of Exhaust Body F (21),and Piston Spring (20).</li> </ol>	→Control rebound of Piston Spring (20) inside to avoid bending of needle valve. →Loosen Cap Screw (23) little by little diagonally. →Check the Piston Spring for wear-out.
Displace Combi Auto Needle B (14)	<ol style="list-style-type: none"> <li>1. Loosen Packing Nut (14) with adjust bar in order to release pressure from Packing Teflon (10) onto Needle B.</li> <li>2. Pull out Cylinder Body (12) straightly. (Combi Auto Needle B (13) comes out with Cylinder body at same time.)</li> <li>3. Hold the tip of Combi Auto Needle B (13) with your hand, and take out from Cylinder Body (12).</li> <li>4. Secure bar portion of Combi Auto Needle B (13) with vice and protect it with rubber plates.</li> <li>5. Loosen Hexagon Nut (19) with spanner one by one, and remove Spring Washer (18).</li> <li>6. Hold Piston (17) tightly with hand and loosen it counterclockwise, and take off.</li> </ol>	→Clean Packing Nut with thinner in case paint is on.  →Pull out straightly to avoid bending needle.  →Do not scratch packing contact area of Needle B to avoid liquid leakage. Check the wear of packing contact area at same time.

Displace New Combi Orifice 3 φ T (6)	1. Loosen New Combi Orifice 3 φ T (6) with nozzle wrench counterclockwise and take off. (Gasket (7) and Baffle (8) will come off at same time.)	→DO NOT drop Gasket (7) and Baffle (8).
Displace packing Teflon (10)	1. Loosen Packing Nut (11) counterclockwise and take off.  2. Pull out Packing Teflon (10), Spacer (32) respectively from inside with adjust bar.	→DO NOT scratch screw.
Displace Filter-Assy (26)	1. Fix flat surface of Adapter-Assy (24) with spanner, and loosen Filter Assy (26) counterclockwise and take off.  2. Take out Filter Assy (26) by hands.(Nylon Washer will come off at same time.)	→Use adjust bar in case Nylon Washer (27) doesn't come off.

## B. Confirmation of Cleaning

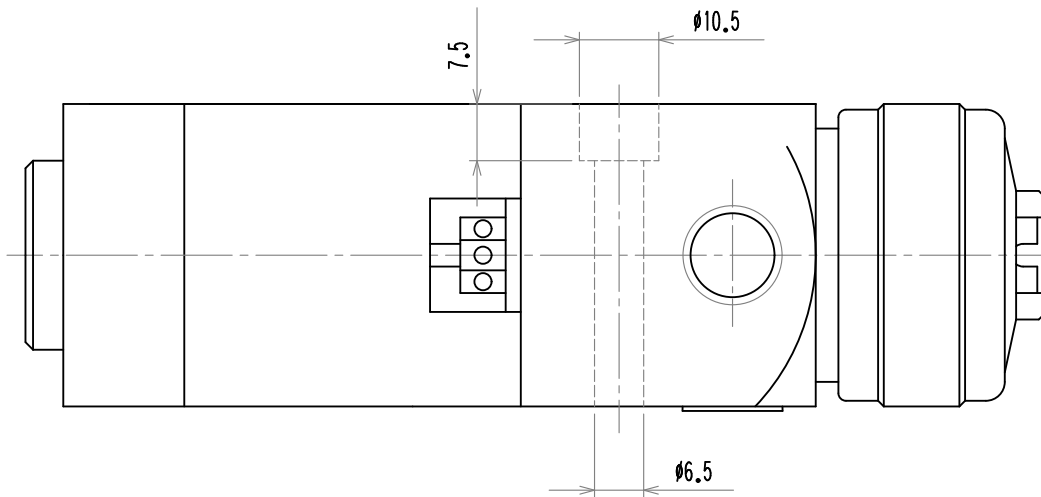
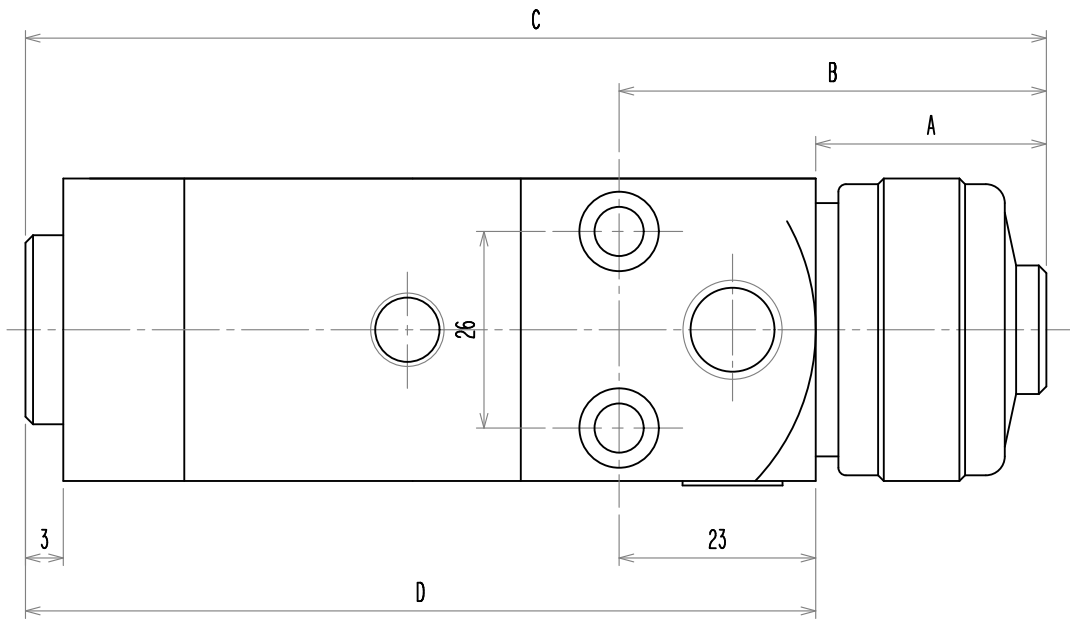
Clean paint and foreign matter on parts with thinner by using soft brush or waste.  
Work in low position. Do not drop parts to avoid crack and damage.

### Special Caution for Main Parts

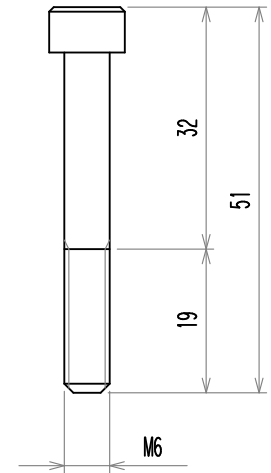
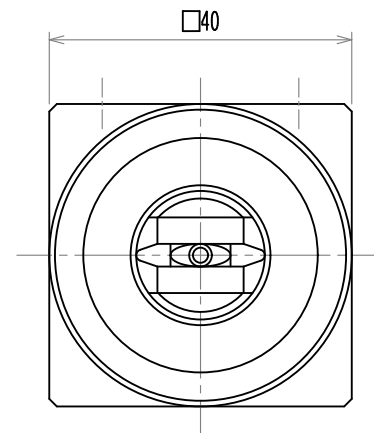
	Draw number	Part	Caution
1	Draw 1	Cap Band E	Adhesion of paint to connection part or screw.
2	Draw 3	Air Orifice S	Crack or dent to connection part and air passageway, paint adhesion, clogging.
3	Draw 4	Air Combi Nozzle	Crack or dent to connection part and paint passageway hole, paint adhesion, clogging.
4	Draw 9	Head Body	Adhesion of paint to connection part or screw crack or dent.
5	Draw 12	Cylinder Body	Crack or dent, and wear on contact part of GLY packing.
6	Draw 13	Combi Auto Needle B3 $\phi$	Crack or dent on packing V and contact part of packing, wear and bent.
7	Draw 20	Piston Spring	Wear-out
8	Draw 26	Filter Assy	Clogging and ripping of screen.


\*Replace parts in case crack is deep enough to feel it with your nail.

\*Packing and Gasket are consumables. Replace them regularly.

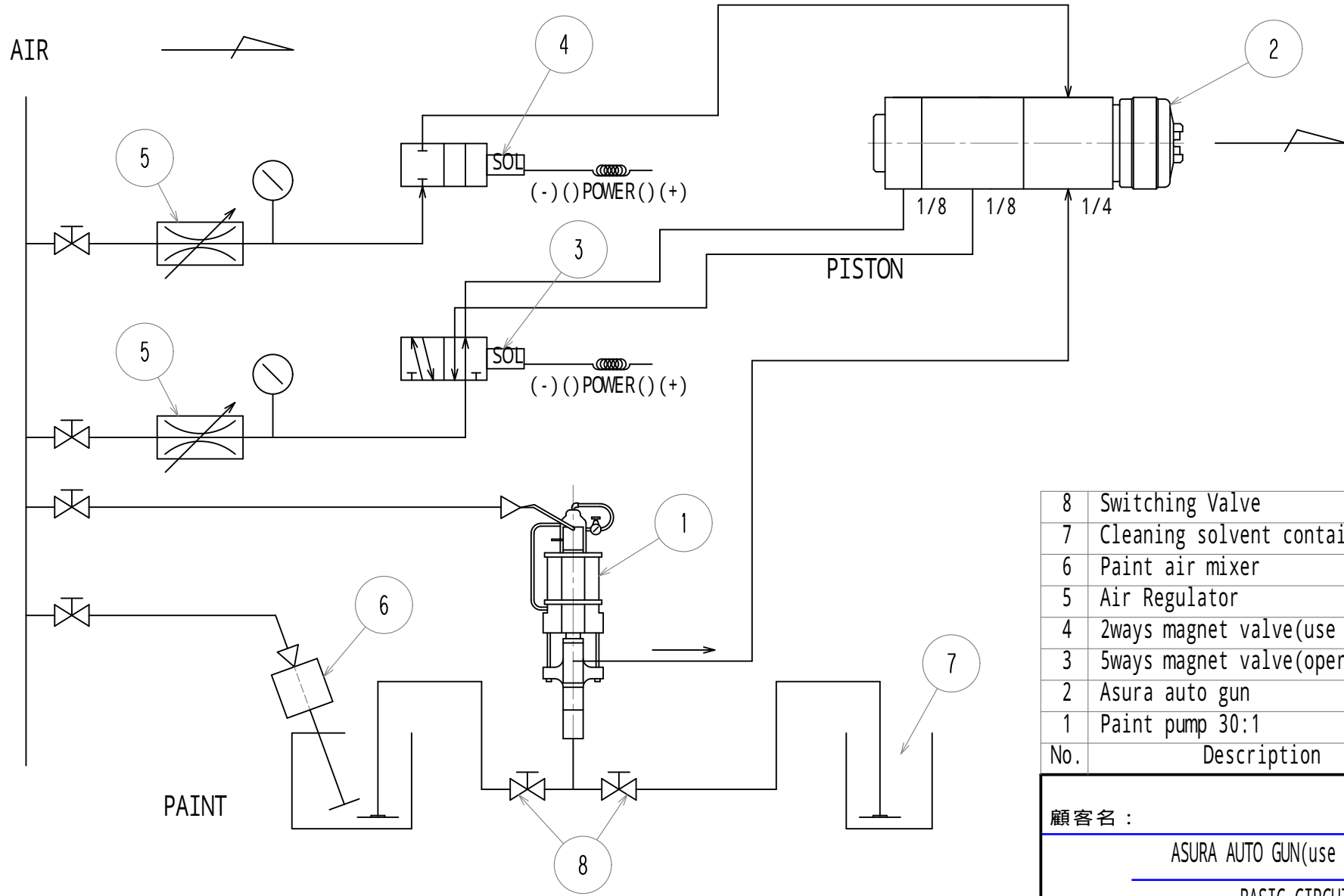


No	Description	(mm)				(g)
		A	B	C	D	
FMC-100	ASURA AUTO GUN	32.5	56.5	135	102.5	700




顧客名:	殿		
名称:	ASURA・COMBI AUTO GUN		
用紙: A4	縮尺: 1:1	図番: FA001A279-1	改定: *
 <b>ファムコ株式会社</b>			

改定	日付: 13.10.29
	作図: MATSUBARA
	承認: UTSUMI

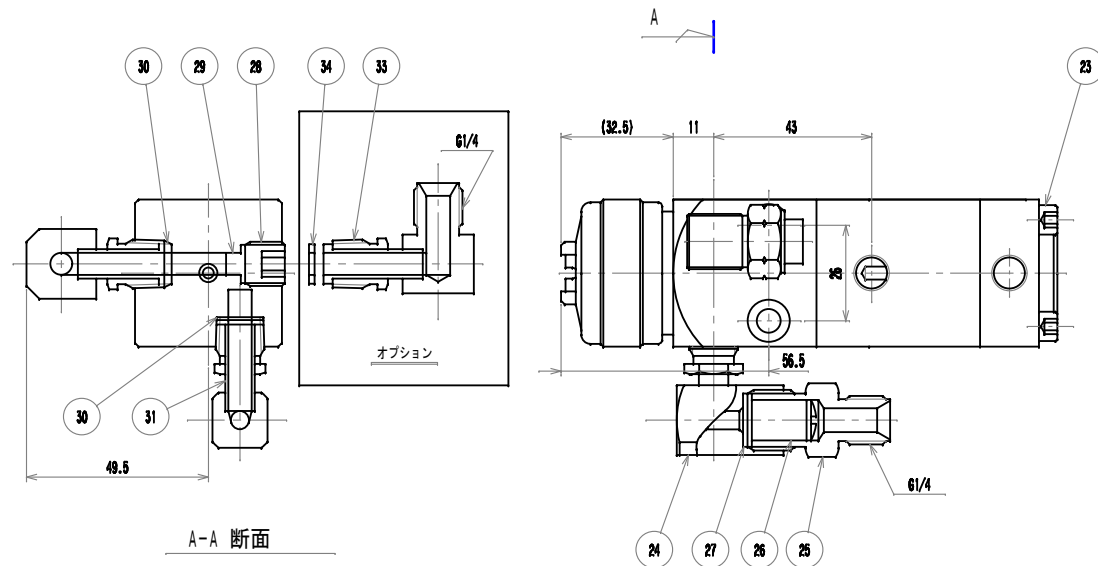
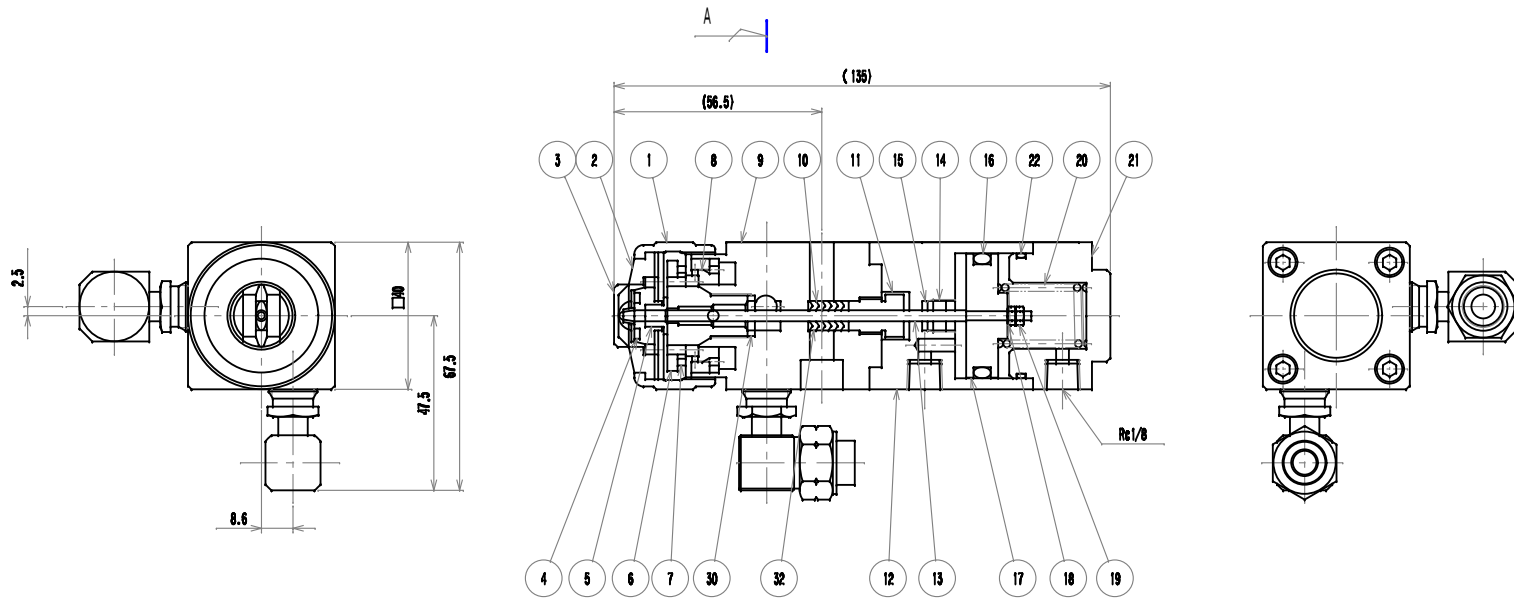


8	Switching Valve	2
7	Cleaning solvent container	1
6	Paint air mixer	1
5	Air Regulator	2
4	2ways magnet valve(use of air)	1
3	5ways magnet valve(operational)	1
2	Asura auto gun	1
1	Paint pump 30:1	1
No.	Description	unit

顧客名:		殿	
ASURA AUTO GUN(use of a gun)			
名称: BASIC CIRCUIT			
用紙: A4	縮尺: NONE	図番: FB001A045	改定: *
		<b>ファムコ株式会社</b>	

改定			日付: 13.10.29
			作図: MATSUBARA
			承認: WAGATSUMA





No.	Part No.	Name of Part	Material	Unit	Spec
34	003-563	Gasket φ6	Nylon	1	
33	003-236	Elbow HP1/4		2	
32	003-102	Spacer A		1	
31	003-558	Elbow 10-8		1	
30	003-563	Gasket φ6	Nylon	3	
29	801-054	Plug Gasket	Nylon	1	
28	801-054	Plug SUS R1/4	SUS	1	
27	801-054	Nylon washer	Nylon	1	t=1.0
26	912-004	Filter Ass'y		1	50M
25	003-237	Filter case		1	
24	003-232	Adapter Ass'y		1	
23	004-008	Cap screw	SUS	4	M5x0.8Thread d Length L=6.5
22	004-007	O ring	Viton	1	S-31.5
21	004-006	Exhaust body	A5056	1	
20	004-005	Piston spring	SWP-A	1	
19	003-113	Hexagon nut	SUS	2	M2.6x0.45 (2kind)
18	003-112	Spring washer	SUS	1	For M2.6
17	004-004	Piston	A2011	1	
16	004-003	O ring	Viton	1	P-28
15	003-108	Mini Y packing	Rubber	1	MYA-3
14	003-225	Air packing nut		1	
13	003-224	Combi auto needle B3φT		1	
12	004-002	cylinder body	A5056	1	
11	003-104	Needle packing nut		1	
10	911-025	Packing tefulon	Teflon	3	
9	004-001	Head body	A5056	1	
8	003-262	Baffle F	C3604	1	
7	003-261	Gasket F	Teflon	1	
6	001-312	New combi orifice3φT		1	
5	001-***	Combi Nozzule Packeng	Nylon	1	
4	002-***	Paint Nozzle		1	
3	001-201	Air orifice S		1	
2	001-251	Cap Bushing	Delrin	1	
1	601-018	Cap band E		1	
No.	Part No.	Name of Part	Material	Unit	Spec

顧客名： 殿

FMC-100

名称： ASURA AUTO GUN Ass'y

用紙： A2 縮尺： 1:1 図番： FA001C044-1 改定： \*



ファムコ株式会社

改定	日付： '14.10.09
	作図： MATSUBARA
	承認： UTSUMI