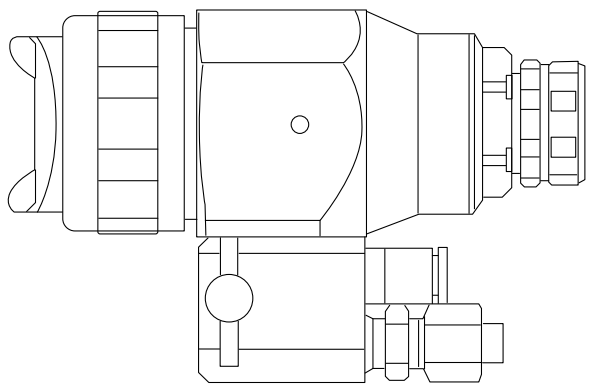
T2AGPV LVMP
COMPACT AUTO GUN Operation Manual

Important : Read and follow all instructions and SAFETY PRECAUTIONS before using this equipment.



DESCRIPTION

T2AGPV LVMP gun is a small, light-weight Automatic Compact gun and suitable for robots and automatic machines.
Models and application information follows.

MODELS

Example: T2AGPV — A 7 8 — 805MT2 — FX

- T2AGPV — Basic Part Number
- A — Delivery adjustable
  - A:Adjustable type
  - B:Fixed type
- 7 — Body material
  - 6:Aluminum
  - 7:Stainless steel
- 8 — Paint passage
  - 8:Non-Circulation
  - 9:Circulation
- 805MT2 — Air Cap No.
  - 805MT2
  - 807MT2
- FX — Fluid Tip(Size)
  - G :0.7mm
  - FX :1.1mm
  - FF :1.4mm
  - FW :1.6mm
  - E :1.8mm

Chart 1

Air Cap		Fluid Tip Size (mm)	Pattern Size Shape	Typical Applications
Marking	Part Number			
805MT2	AV-1239-805MT2	G(0.7) FX(1.1) FF(1.4) FW(1.6) E(1.8)	220mm Blunt	Most conventional materials Waterborne
807MT2	AV-1239-807MT2	G(0.7) FX(1.1) FF(1.4) FW(1.6) E(1.8)	280mm Taper	Most conventional materials Waterborne

Chart 2

Air Cap	Tip Marking (mm)	Part Number (Tip & Needle Lapped Set)	
805MT2 807MT2	G(0.7)	T2AG-440-G	
	FX(1.1)	T2AG-440-FX	
	FF(1.4)	T2AG-440-FF	
	E(1.8)	T2AG-440-E	
805MT2 807MT2	G(0.7) FX(1.1) FF(1.4) FF(1.6)	Fluid Tip	Needle
		T2AG-4S-G T2AG-4S-FX T2AG-4S-FF T2AG-4S-FW	T2AG-402-FZ T2AG-402-FZ T2AG-402-FZ T2AG-402-FZ

SAFETY PRECAUTIONS

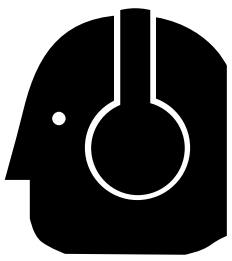
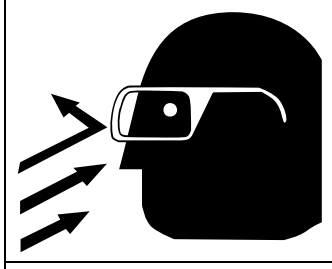
This manual contains important information that ALL users should know and understand BEFORE using this equipment. This information relates to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS.
To help you recognize this information, we use the following terms to draw your attention to certain equipment labels and portions of this manual. Pay special attention to any label or information that is highlighted by one of these terms:

WARNING	Important information to alert you to a situation that might cause serious injury or loss of life if instructions are not followed.
CAUTION	Important information that tells how to prevent damage to equipment.
NOTE	Information that you should pay special attention to.

WARNING

The following hazards may occur during the normal use of this equipment. Please read the following chart.

HAZARD	CAUSE	SAFEGUARDS
Fire 	Solvents and coatings can be highly flammable or combustible, especially when sprayed.	1. Adequate exhaust must be provided to keep the air free of accumulations of flammable vapors. 2. Smoking must never be allowed in the spray area. 3. Fire extinguishing equipment must be present in the spray area. 4. Static discharges must be prevented. Ground(earth) all conductive objects in the spray area, such as a cleaning solvent bucket, fire extinguisher, etc. 5. When using solvents for cleaning: · Those used for equipment flushing must have a flash point equal to or greater than that of the coating. · Those used for general cleaning must have flash points above 100°F (37.8°C).
Inhaling Toxic Substances 	Certain materials may be harmful if inhaled or if there is contact with the skin.	1. Follow the requirements of the Material Safety Data Sheet supplied by coating material manufacturer. 2. Adequate exhaust must be provided to keep the air free of accumulations of toxic materials. 3. Use a mask or respirator whenever there is a chance of inhaling sprayed materials. The mask must be compatible with the material being sprayed and its concentration. Equipment must be as prescribed by an industrial hygienist or safety expert, and be NIOSH approved.
Explosion Hazard – Incompatible Materials 	Halogenated hydrocarbon Solvents- for example: methylene chloride and 1,1,1,-Trichloroethane are not chemically compatible with the aluminum that might be used in many system components. The chemical reaction caused by these solvents reacting with aluminum can become violent and lead to an equipment explosion.	The T-AGB spray gun can be used with these solvents. However, aluminum is widely used in other spray application equipment – such as material pumps, cups, regulators, valves, etc. Check all other equipment items before use of these solvents. Read the label or data sheet for the material you intend to spray. If in doubt as to where or not a coating or cleaning material is compatible, contact your material supplier.

HAZARD	CAUSE	SAFEGUARDS
General Safety	Improper operation or maintenance may create a hazard.	Operators should be given adequate training in the safe use and maintenance of the equipment (in accordance with the requirements of NFPA-33, Chapter 15 in U.S.). Users must comply with all local and national codes of practice and insurance company requirements governing ventilation, fire precautions, operation, maintenance and housekeeping (in the U.S., these are OSHA Sections 1910.94 and 1910.107 and NFPA-33).
Noise Levels 	The continuous A-weighted sound pressure level of this spray gun may exceed 85dB(A) depending on the air cap/nozzle set-up being used. Sound levels are measured using an impulse sound level meter and analyzer, when the gun is being used in a normal spraying application. Details of actual noise levels produced by the various air cap/nozzle set-ups are available on request.	Wear earplugs when using the spray gun.
Spraying solvent 	Pressured air/fluid passage may be broken when cleaning or flashing with solvent. The solvent may be harmful if contacted with eyes.	Always wear eye protection when spraying or cleaning the equipment.

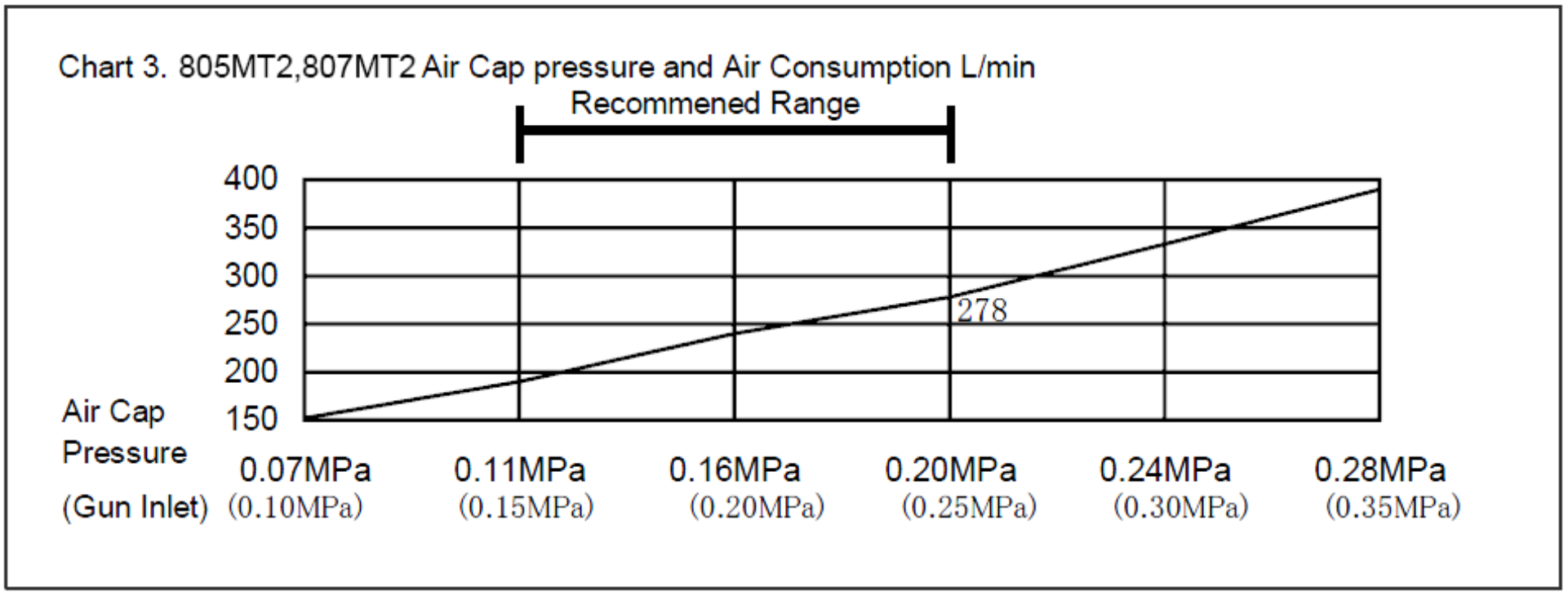
Misuse:

- All spray guns project particles at high velocity and must never be aimed t any part of body.
- Never exceed the recommended safe working pressure for any of the equipment used.
- The fitting of non-recommended or non-original accessories or spare parts may create hazardous conditions.
- Before dismantling the equipment for cleaning or maintenance, all pressures, air and material, must be isolated and released.

Disposal of non-metallic materials must be carried out in an approved manner. Burning may generate toxic fumes.
The removal of waste solvents and coating materials should be carried out by an authorized local waste disposal service.

SPECIFICATIONS

Max. Air Pressure	0.69MPa (7.0kgf/cm^2)
Max. Fluid Pressure	0.69MPa (7.0kgf/cm^2)
Cylinder Air Pressure	Min. 0.34MPa (3.5 kgf/cm^2) Max. 0.49MPa (5.0 kgf/cm^2)
Weight	730g (SUS / Adjustable type / Type for Non-Circulation) 336g (Aluminum/Adjustable type / Type for Non-Circulation)
Mounting Stud	Dia. 19mm x 51mm
Fluid Tube	6x4mm
CYL Air Tube	6x4mm
CAP Air Tube	6x4mm
FAN Air Tube	6x4mm



INSTALLATION

Figure 1. Dimensions

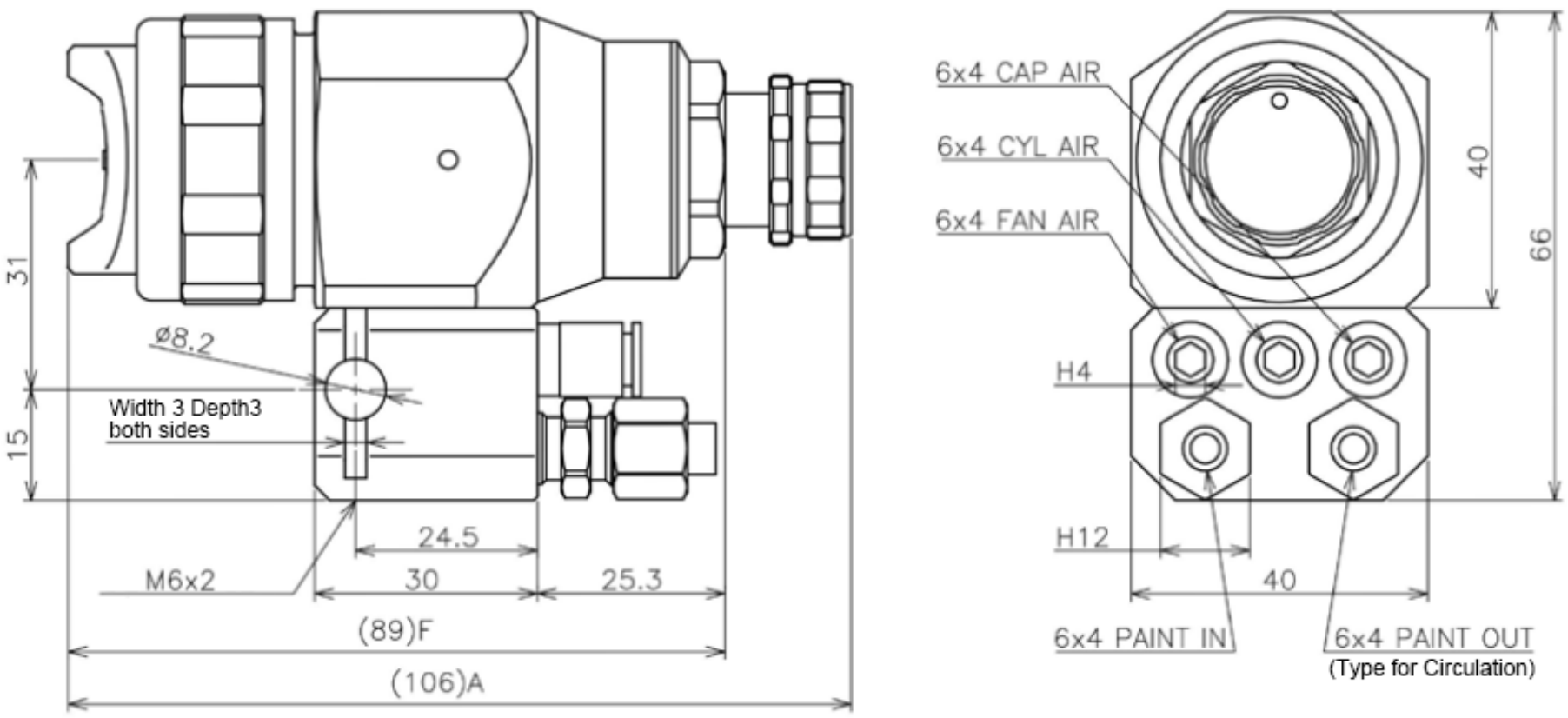
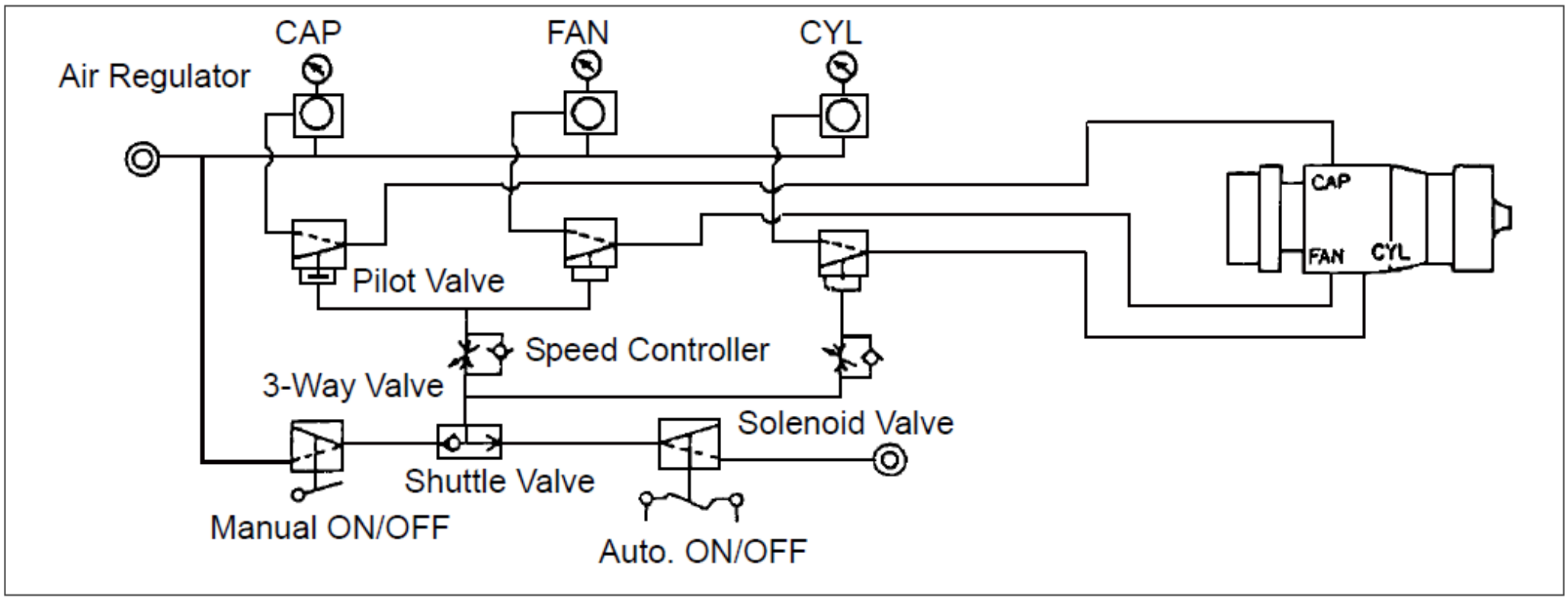


Figure 2. Installation



Mount the gun with the stud (Ø19) or tighten with Manifold (14) 8.2mm whole.

CAUTION:

The air supplied to the gun should be clean air that removed any impurities.

OPERATION

1. Mix, prepare and strain the coating material to be sprayed according to paint manufacturer's instructions.
2. Adjust the CYL air at 0.34~0.49Mpa.
3. When the adjustable type is used, turn the Adjusting Screw counter-clockwise about 4.0 turns from fully closed position to make it fully opened (where it lightly bumps against). Do not turn it more than that.
4. Adjust the CAP/FAN air at about 0.20Mpa.
5. Adjust fluid air at about 0.07Mpa~0.1Mpa.
6. Turn on CYL air and test spray. Adjust fluid and air pressure until desired pattern is obtained. Control fluid pressure at source supply. Always attempt to keep CAP pressure as low as possible to minimize overspray.

WARNING

Risk of injury. Equipment and fluid may be under pressure. Pressure in the system must be relieved before beginning the cleaning procedure and before replacing any parts. Follow the procedures in the literature provided with the system.

CLEANING

1. Please follow the instruction manual for the pressure tank or the feed pump to clean the supply equipment.
2. Supply gun with thinner from that supply equipment or another supply device.
3. Turn on CYL air and clean the fluid passages until the thinner comes out clean and clear. Quick Cleaner which supplies a mixture of air and solvent can be used to improve cleaning efficiency and save solvent. See "ACCESSORIES" for Quick Cleaner. Wipe gun exterior with a solvent dampened cloth.
4. When the gun is used in a paint circulation system, it may be necessary to design a system in which the paint return line will be shut off temporarily in order to clean the forward portion of the gun.

CAUTION

Do not totally submerge gun in solvent. It is possible to damage the inside of the gun with solids.

CAUTION

The air cap can be immersed in solvent for cleaning. If orifices are clogged, use a cocktail stick or toothpick to remove obstruction. Never use a steel wire or hard instrument. This will damage air cap and result in a distorted spray pattern.

REPLACEMENT

Tools Required

- Crescent Wrench
- 10mm or 13mm Box Wrench
- Pliers (for Needle Assy)
- Open Wrench
- Hex Wrench

Fluid Tip (5)

1. Relieve all air and fluid pressure in system.
2. Remove Rear Body (10or11), Needle Spring (9). Pull Needle Assy (8) out from gun body with Pliers.
3. Remove Retaining Ring (1) and Air Cap (4).
4. Remove Fluid Tip (5) with 1/2 Box Wrench.
5. Reassemble in reverse order. Recommended torque of Fluid Tip (5): 16~20N·m.

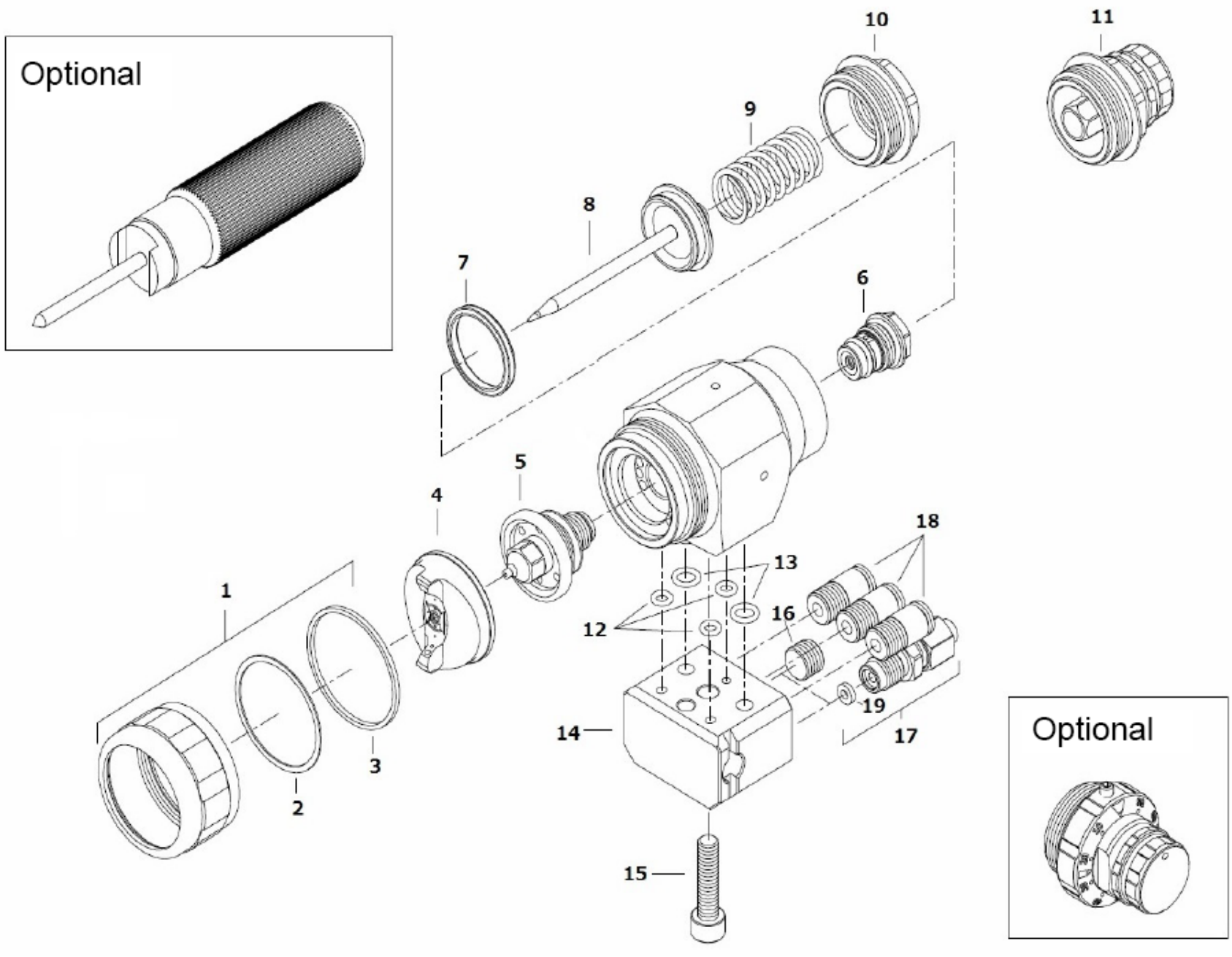
Replacing Needle Assy (8), Piston Seal (7)

1. Remove Rear Body (10or11), Needle Spring (9). Pull Needle Assy (8) out from gun body with Pliers.
2. Insert the new Needle Assy and install the Spring and Rear Body.
3. Piston Seal should not be reused because it would be damaged when removed.

Replacing Needle Seal Kit (6)

1. Remove Rear Body (10or11), Needle Spring (9). Pull Needle Assy (8) out from gun body with Pliers.
2. Remove Needle Seal Kit (6) with 13mm Box Wrench or specialized tool (Optional).
3. Attach new Needle Seal Kit (6) to the gun body with the 13mm Box Wrench or specialized tool (Optional). Before doing it please apply a little bit of vaseline to the O-ring of the Seal Kit.
4. Before inserting to the gun, apply vaseline to the Piston Seal (7) of Needle Assay (8).
5. Insert Needle Spring (9), and assemble Rear Body.
6. Pressure 0.35Mpa on CYL and check the movement of needle.

Figure 5. Gun Exploded View

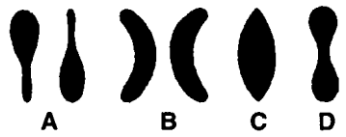


Item No.	Part Number	Description	Q’ty	Remarks
1	T2AG-368	Retaining Ring	1	with Cap Seat and Ring Gasket
2	T2AG-50-K5	Cap Seat	1	5 pieces
3	T2AG-55-K5	Ring Gasket	1	5 pieces
4	Refer to Chart1	Air Cap	1	
5	Refer to Chart2	Fluid Tip	1	
6	T2AG-10	Needle Seal Kit	1	
7	T2AG-102	Piston Seal	1	
8	Refer to Chart2	Needle	1	
9	T2AG-106	Needle Spring	1	
10	T2AG-500	Rear Body(Fixed type)	1	
11	T2AG-600	Rear Body(Adjustable type)	1	
12	T2AG-140	O-Ring (Small) S4	3	2 for fluid, 1for air
13	T2AG-130	O-Ring (Big) S6	2	for air
14	T2AG-100AL T2AG-100SS	Manifold (Aluminum) Manifold (SUS)	1	
15	--------	Hexagon Socket Bolt M6×L25	1	Commercial product
16	--------	Plug 1/8	1	Commercial product
17	T2AG-STU-64	Joint for Fluid	2	with Fluid Seal
18	EC6-R1/8A-M-R1001	Joint for Air	3	
19	T2AG-TU-1-K5	Fluid Seal Kit of 5	2	
	T2AG-3-K	Mounting Stud Kit		Optional
	T-AGPZ-34	Specialized Tool for Needle Seal Kit		Optional (Refer to Figure 5.)
	T2AG-700	Rear Body(Adjustable type with scale)		Optional (Refer to Figure 5.)

SERVICE CHECK

Normal spray pattern

The proper combination of fluid pressure, fan and atomization air pressure, and fluid tip size should result in a pattern of this shape.

Problem	Cause	Correction
Will not spray.	No pressure to gun. Piston stops moving.	Check air and material lines. Check CYL air pressure.
Improper spray pattern.  A B C D	A. Gun not adjusted properly. A, B. Material build up on the air cap (4)or fluid tip (5).	A. Re-adjust. See “Operation Section”. A, B. Clean the air cap or fluid tip. See “Preventive Maintenance”.
	Note To determine where the material build up is, rotate the air cap (4) 180°and test spray. If the pattern stays in the same position, the condition is caused by material build up on the fluid tip (5). If the pattern changes with air cap movement, the buildup is in the air cap (4).	
	C, D. Wrong material or material too thick. Insufficient material or atomizing air pressure too high.	C, D Adjust material pressure or thin material. Increase material or reduce atomizing air pressure.
Jerky or fluttering spray 	1.Insufficient material in the tank or an obstruction in the line. 2.Gun material passage plugged. 3.Worn Needle Seal Kit (7). 4.Loose or damaged Fluid Tip (3).	1. Fill tank or clear obstruction. 2. Clean. 3. Replace or tighten. 4. Tighten or replace.
Air leaking from the center hole of Rear Body	Damaged or worn Piston Seal (7). Damaged cylinder part of the gun body	Replace. Gun body may not be used depending on the extent of the damage.
Liquid spill from Fluid Tip (5)	Clogged Needle (8) of the Fluid Tip (5) Damaged or worn Fluid tip (5) or Needle (8) Damaged or deformed Needle Spring (9)	Clean. Replace. Replace.
Air or paint leaking from the 3mm hole of the gun body	Damaged or worn Needle Seal Kit (6)	Replace.

ACCESSORIES

Part No.	Description
SSL-10	Gun Lube (60cc)
42884-214-K5	Cleaning Brush Kit of 5
GC-100-K48	Gun Cover Kit of (48)
HD-505-W	Quick Cleaner(5ℓ)
HD-510	Quick Cleaner(10ℓ)
KK-5033-805MT	Air Cap Test Gauge (for AV1239-805MT2)
KK-5033-807MT	Air Cap Test Gauge (for AV1239-807MT2)
AGA-415	Universal Clamp

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