

ATOMEX™

Internal Pipe Sprayer



250mm - 600mm
High Pressure 3600psi

INSTRUCTION MANUAL



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For Your Safety

Please carefully read this manual and get yourself acquainted with the equipment.

Please observe the operating procedures in the manual. Failure to do so may result in **personal injury and/or damage to property**.

This manual covers only minimum safety precautions and it does not suggest or imply that no other precautions are required. Of course, each enterprise must observe its own rules as well as the laws and regulations of the country or region in which it operates, in addition to the safety precautions in the manual.

Again, shown on the pages that follow are basic and minimum safety precautions for use of our products.

- As shown below, safety precautions are classified into three categories based on the severity of hazards involved.

	WARNING	Alerts a hazardous situation which may result in personal injury, with instructions on how to avoid it.
	CAUTION	Alerts a hazardous situation which may result in damage or breakage to equipment, with instructions on how to avoid it.
	NOTICE	Indicates important methods and practical information.

※ A hazardous situation classified into the CAUTION category could cause a serious accident depending on how things develop. All the precautions in the manual convey significant information that you must observe such precautions in order to ensure your own safety and prevent equipment from failure.



General Instructions Before the Start of Operation

- ① An airless pump needs to be provided separately to compress the paint used for the pipe inside coating equipment.
- ② Compressed air is used to rotate the spray nozzle and operate the spray gun. The air to be supplied to the compressor shall be dry.
- ③ Prepare hoses longer than the pipe to be coated.
- ④ Before starting the airless pump, read safety instructions for the pump.
- ⑤ The applicable pipe inside diameter range for the AX/250-600 is 250mm - 600mm.

Operating Procedure and Safety Instructions

① Unpackaging and connection

Although the equipment is 100% checked at the factory so that it can be directly used after connected with the pump, hoses and gun, some parts of the equipment may have been damaged or lost during transportation or for another reason. Fully check for missing or damaged parts after unpackaging and, if any, please contact us or one of our distributors.

●Preparation for coating

- (1) Connect the material and air hoses.

Coating equipment body : Material hose 1

Coating equipment body : Air hose Spray ON/OFF air hose 1

 Air hose Spray nozzle rotating air hose 1

Control box : 2 air hoses identical to the ones specified above and an air supply hose

Before starting, close (rotate counterclockwise) the air regulator on the control box and set the spray ON/OFF and spray nozzle rotation switch valves set to "OFF."

- (2) Mix the paint in a container and insert a suction filter into the container.
- (3) Open (rotate clockwise) the air regulator for airless pump to run the airless pump and feed the paint under pressure to the pipe inside coating equipment. Set the paint pressure around 4 to 5MPa at this time.



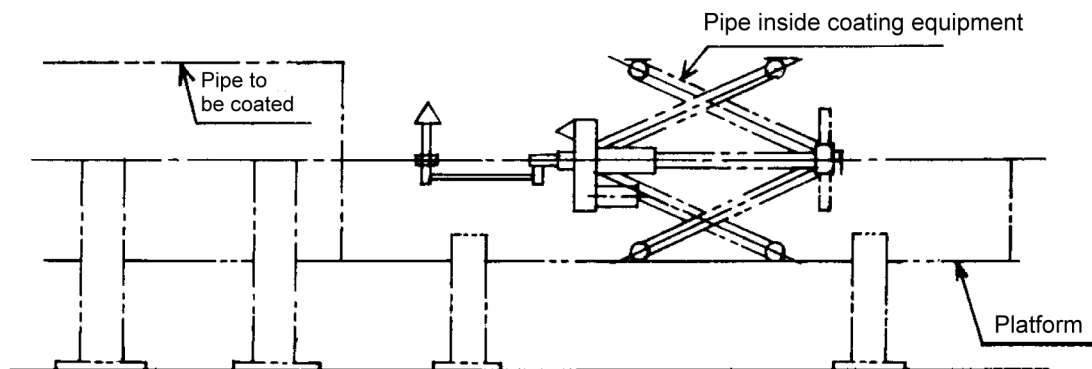
Internal Pipe Sprayer (250 - 600mm)

- (4) Supply the compressed air into the control box.
- (5) Put a can at the tip of the spray nozzle to perform a spray test.
Set the spray switch valve on the control box to "ON." The washing fluid and air come out first and, after a while, the paint comes out. (Do not install the spray nozzle at this time.) Next, install the spray nozzle and adjust the paint pressure to a level that permits atomization. Perform a spray test. If the paint is not properly atomized in this test, adjust the paint pressure, spray nozzle, paint viscosity, etc. to obtain better atomization results.
Set the paint pressure to the lowest possible level that ensures good atomization results. Too high pressure may cause damage to the coating equipment, material hose, spray nozzle, etc. and/or accelerate the wear.
- (6) Insert the coating equipment into the pipe to be coated and adjust it to the inside diameter of the pipe. Insert it until it reaches the end opposite from the draw-out port.
- (7) Adjust the spraying distance.
The optimum distance between the spray nozzle tip and the inside surface of the pipe (spraying distance) is 150 to 200mm for the AX/250-600, although it depends on the paint type, coat thickness and pipe inside diameter.
- (8) Set the spray nozzle rotation switch valve to "ON" and slowly open (rotate clockwise) the air regulator to rotate the spray nozzle.
The rotating speed shall be set to an adequate level according to the paint discharge rate, pattern width, specified coat thickness, pipe inside diameter and other conditions. Once an adequate rotating speed is obtained, stop the spray nozzle using the switch valve without changing the air regulator setting.

② Operating procedure

- (1) Set the spray nozzle rotation switch valve to "ON" to rotate the spray nozzle.
- (2) Set the spray switch valve to "ON" and draw the coating equipment toward you.
The speed at which the coating equipment is drawn toward you shall be predetermined according to the paint type, paint discharge rate, pattern width, specified coat thickness, pipe inside diameter and other conditions.
- (3) Once the coating equipment comes near the draw-out port, set the spray switch valve to "OFF." Also set the spray nozzle rotation switch valve to "OFF."
Then, the coating process has been completed.

Although the surface in the vicinity of the draw-out port cannot be coated with the coating equipment, it is still possible to coat the whole inside surface by installing a semi-circular pipe with a slightly larger diameter than the inside diameter of the pipe to be coated (and longer than the coating equipment) at the same height with the pipe to be coated.



③ After the completion of operation

Before a noon recess or break or at the end of a day's work, only remove the spray nozzle and immerse it in a washing fluid. When withdrawing the equipment from service for two or three days, take the following action.

(When using a two-component paint, wash the spray nozzle every day.)

- (1) Remove the spray nozzle and immerse it in a washing fluid.
- (2) Drain the paint from the system. Place a can below the spray nozzle of the coating equipment. Remove the suction filter for airless pump from the paint can and open (rotate clockwise) the air regulator for driving the airless pump to run the airless pump at a lower pressure. Then, set the spray switch valve to "ON" to drain the paint from the system.
- (3) Flush throughout the system using a washing fluid. This operation shall be performed in the same manner as for "pressure feeding" or "draining" except that a lower pressure shall be used.
- (4) Overhaul and wash the material filter.
- (5) Close the compressed air supply valve. Washing shall be completely performed. Insufficient washing causes the gelled paint to clog the spray nozzle, resulting in poor coating results. Wash the spray nozzle after immersing in the washing fluid for a while or remove it from the washing fluid for washing directly before use.



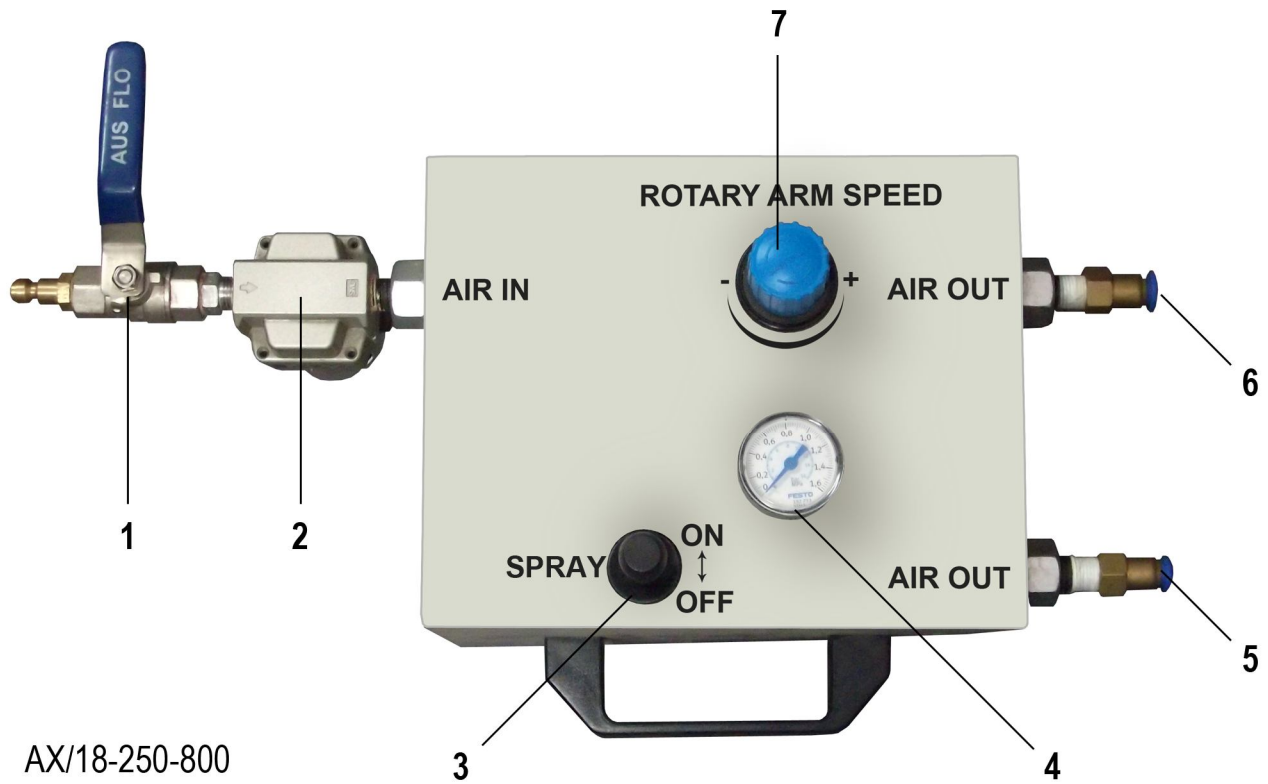
④ Maintenance of the equipment

- (1) Occasionally re-grease the gears in the gear case (usually every 500 hours).
- (2) If the paint starts leaking from the adapter, replace the V-packings.
The replacement procedure is described below.
Remove the nozzle extension and nipple. Then, remove the packings one by one using a needle-like pin. Assemble in the reverse order of disassembly. Take care to install the V-packings in the correct direction.
- (3) If the dried paint clogs up, overhaul and clean.
- (4) The paint leakage from the packing retainer in the AX/250-600 gun can be stopped by tightening the retainer. If it persists, replace the V-packings with new ones.
The replacement procedure is described below.
 - 1) Set the 1/4B ball valve to "OFF" and loosen the flareless joint.
 - 2) Loosen the hexagon socket screws and remove the PIP automatic gun.
 - 3) The automatic gun overhauling procedure is described below.
Loosen the hexagon socket screws and slightly pull out the air cylinder section. Remove the packing retainer from the gun head and further pull out the air cylinder section. The needle shaft is then removed together.
 - 4) Remove the V-packings using a needle-like pin. Assemble in the reverse order of disassembly. Take care to install the V-packings in the correct direction. Also check the O-ring at this time and replace if damaged.

⑤ Other precautionary notes

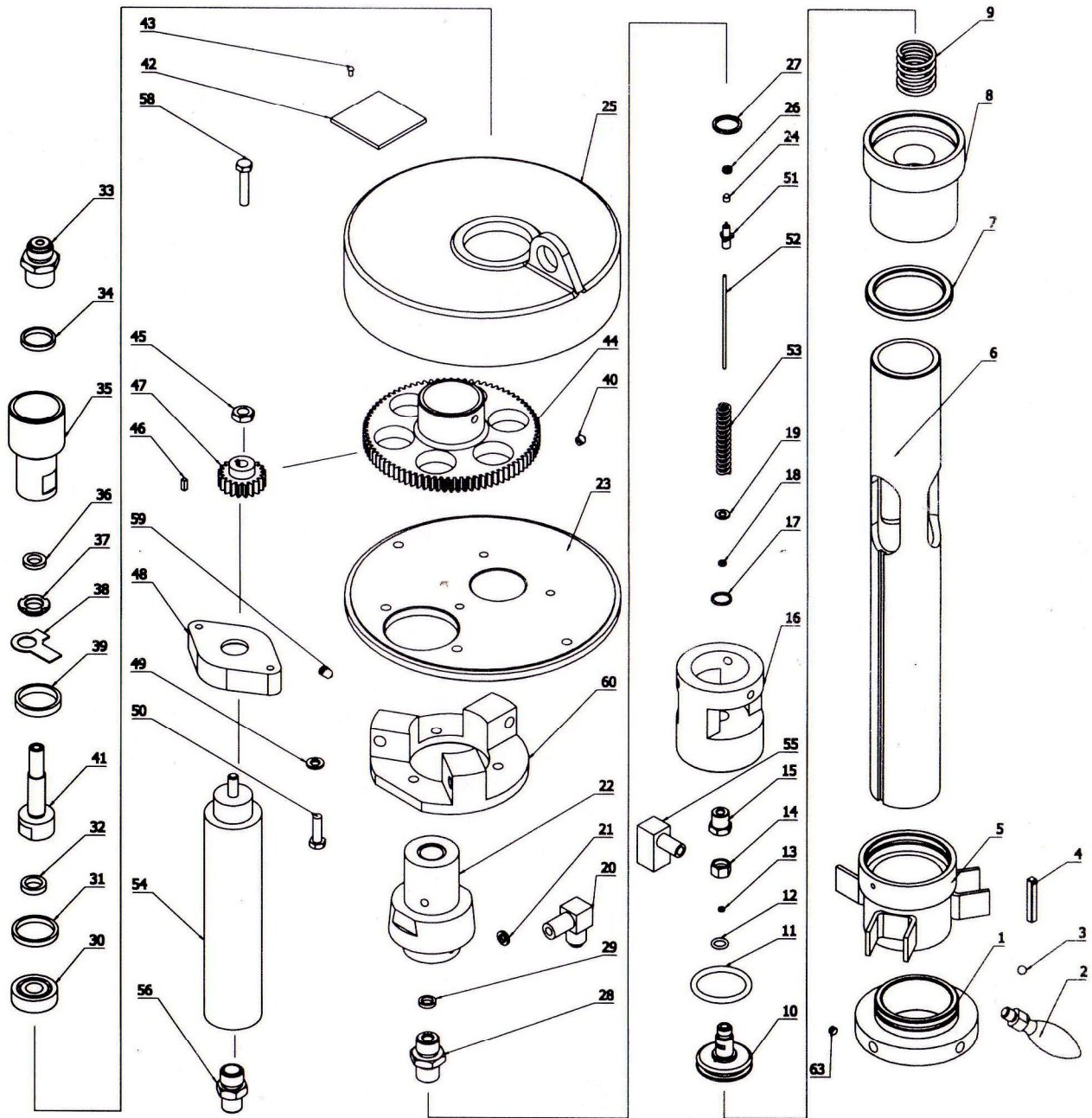
- (1) The equipment body is contaminated with paint, etc. when inside the pipe and shall be covered with a vinyl chloride sheet or such. The sheet shall be occasionally replaced.
- (2) The compressed air to be supplied to the air cylinder for the AX/250-600 gun and the spray nozzle rotating air motor shall be free from moisture and foreign matter.
- (3) Do not raise the paint pressure exceeding the required value. The maximum operating pressure for the coating equipment is 20MPa.
- (4) The compressed air to be supplied to the spray switch valve shall be adjusted between 0.5 and 0.7MPa.
- (5) The spray nozzle discharge rate and pattern width shall be appropriately selected from the spray nozzle table in connection with the pipe to be coated.

Control Box Parts Description



AX/18-250-800

Item Location	Description
1	Air Ball Valve
2	Micro Mist Filter
3	Spray Control On/Off - Fluid Control
4	Air Pressure Gauge
5	Air Outlet - Fluid Control
6	Air Outlet - Rotation Control
7	Regulator - Rotation Speed Control



AX/18-250-900



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Parts Table

Item Location	Description	Part No	Item Location	Description	Part No
1	Adjustment Retaining Flange	AX/18-250-901	30	Bearing	AX/18-250-930
2	Adjustment Flange Knob	AX/18-250-902	31	Seal	AX/18-250-931
3	Grub Screw	AX/18-250-903	32	Washer	AX/18-250-932
4	Guide	AX/18-250-904	33	Gun Kit Diffuser	AX/18-250-933
5	Adjustment Flange	AX/18-250-905	34	Washer	AX/18-250-934
6	Main Body	AX/18-250-906	35	Gun Kit Housing	AX/18-250-935
7	Main Body Retaining Seal	AX/18-250-907	36	Washer	AX/18-250-936
8	Piston Housing	AX/18-250-908	37	Retaining Washer	AX/18-250-937
9	Piston Spring	AX/18-250-909	38	Control Bracket	AX/18-250-938
10	Piston	AX/18-250-910	39	Retaining Ring	AX/18-250-939
11	O Ring	AX/18-250-911	40	Grub Screw	AX/18-250-940
12	O Ring	AX/18-250-912	41	Shaft	AX/18-250-941
13	Nut	AX/18-250-913	42	Name Plate	AX/18-250-942
14	Nut	AX/18-250-914	43	Grub Screw	AX/18-250-943
15	Nut Guide	AX/18-250-915	44	Drive Gear Main	AX/18-250-944
16	Actuator Housing	AX/18-250-916	45	Retaining Nut	AX/18-250-945
17	O Ring	AX/18-250-917	46	Pin	AX/18-250-946
18	O Ring	AX/18-250-918	47	Drive Gear	AX/18-250-947
19	Washer	AX/18-250-919	48	Air Motor Retainer	AX/18-250-948
20	Air Inlet Elbow	AX/18-250-920	49	Washer x 2	AX/18-250-949
21	O Ring	AX/18-250-921	50	Nut x 2	AX/18-250-950
22	Actuator Centre	AX/18-250-922	51	Gun Needle Kit	AX/18-250-951
23	Main Plate	AX/18-250-923	52	Gun Needle	AX/18-250-952
24	Guide	AX/18-250-924	53	Gun Needle Spring	AX/18-250-953
25	Main Cover	AX/18-250-925	54	Drive Motor	AX/18-250-954
26	Seal	AX/18-250-926	56	Inlet	AX/18-250-956
27	Washer	AX/18-250-927	60	Flange	AX/18-250-960
28	Gun Kit Guide	AX/18-250-928	63	Grub Screw	AX/18-250-963
29	Seal	AX/18-250-929			



Warranty

ATOMEX (the "Company") shall provide the original purchaser (the "Purchaser") with warranty service against defects in design, manufacturing or indications for a period of one (1) year from the date of purchase of the product, as follows:

Should you find defects in design or manufacturing with regard to parts, ship them back to the Company, freight prepaid. The Company shall repair or replace the parts free of charge and reimburse the freight charges, provided that, as a result of an inspection and investigation of the parts conducted by the Company, the defects are deemed to be attributable to the factors within the Company's responsibility.

When, on the other hand, defects are found, as a result of inspection and investigation conducted by the Company, to be attributable to natural wear, corrosion, negligence, accidents, an act of God, installation contrary to the Company's instructions, abusive use or misuse, operation contrary to the instructions appearing in the manual, or unauthorized modification, this warranty shall not apply. Neither shall it apply to any services that are conducted outside Australia. In these circumstances, any costs that may be incurred on repair or freight shall be the responsibility of the Purchaser.

In the event also of failure caused by use in conjunction with a hose or a gun, etc. of a maker not approved by the Company, the warranty does not apply. In these circumstances, the Company will submit a quotation for the costs of whatever corrective measures are necessary, repair or replacement, including relevant terms and conditions.

As for items such as parts purchased by the Company from another manufacturer, the warranty of that manufacturer shall apply.

As for any parts deemed to be defective, the Company shall not be held liable for any expenses beyond the provision of replacement parts free of charge.

The Company shall not be held liable for any damage to the Purchaser caused by factors not attributable to the Company, such as misuse of product, etc.

When handing the equipment over to the next user, always attach this manual to the equipment.