



# CF5AR100 Installation and Maintenance

MASTER PNEUMATIC - DETROIT, INC.

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## PRODUCT NUMBERS:

CF5AR100-2  
CF5AR100-3  
CF5AR100-4  
CF5AR100-6

## THANK YOU!

You have just purchased a quality Filter-Regulator from Master Pneumatic.

With care in its installation and maintenance, you can expect it to have a long and economical service life. Before you go any further, please take a few minutes to look over this information, then save it for future reference and for the useful service information it contains.

## Installation & Operation Procedures

**NOTE:** Read Warning Stuffer STU-A019 included in box with product before proceeding.

### INSTALLATION:

1. Depressurize and lockout air pressure.
2. Upstream pipes must be free of excessive dirt and liquids.
3. Install the Filter-Regulator as near as possible to the device it is to serve.
4. Install the Filter-Regulator so that air flows from inlet to outlet as shown on the head.
5. The Filter-Regulator must be installed vertically with drain mechanism at the bottom.
6. The Filter-Regulator has gauge ports on both sides of the head. It is necessary to install a pressure gauge or pipe plugs into each port before operating.
7. Filter-Regulators should be installed upstream of any Lubricators in the airline.
8. If installing using modular clamp connection KA30-04, torque screws 15-20 in-lbs.

### OPERATION:

1. When adjusting pressure setting, always reset from a pressure lower than the final desired setting. For example, lowering pressure from 100 psi to 50 psi should be done by decreasing pressure to 30 psi then increasing to 50 psi.
2. To increase pressure turn Adjusting Knob clockwise, to lower pressure turn counter-clockwise.
3. Pull out Adjusting Key for non-adjustment or remove for tamper proof.
4. Filter may be drained manually by turning Drain Knob clockwise until bowl drains. Return to full counter-clockwise position for automatic drain position. To install 3/16 flexible tubing, push Drain Knob up to expose the Drain Clip. Remove the Drain Clip and Drain Knob. Push tubing on Stem. A tube clamp should be used to retain tubing on drain stem.
5. Replace Plastic Bowls with Metal if any signs of crazing or cracking is observed.
6. Replace Element when dirty. If pressure differential reaches 8 psid, element MUST be replaced.

### TO CLEAN OR REPAIR:

1. Depressurize and lockout air pressure.
2. Remove Bowl Ring and Bowl Assembly by turning counter-clockwise.
3. Remove Sleeve Assembly by pulling off.
4. The Filter Element can now be removed. Do NOT clean elements, they must be replaced. Sintered Bronze elements may be cleaned by soaking several hours in soap and water, then blowing them out in reverse direction to normal flow with compressed air.
5. Remove CFR Cap by turning counter-clockwise.
6. Valve Spring and Valve can now be removed. Visually inspect for defects, replace if needed.
7. To service Float Drain, remove Bowl Baffle from Bowl Assembly. Turn Drain Knob counter-clockwise until it stops. Then push Drain Knob up to expose Drain Clip. Remove Drain Clip and pull off Drain Knob.
8. Remove Drain Nut by turning counter-clockwise. The Float Drain can now be removed from Bowl and disassembled.
9. The Float Drain and Bowl can now be cleaned. (*For instructions to repair Float Drain see STU-A027.*)
10. To service Regulator side, reduce Spring load to zero by turning Adjusting Knob counter-clockwise.
11. Remove Dome by turning counter-clockwise.
12. Diaphragm Assembly can now be removed. Visually inspect for defects, replace if needed.
13. When re-assembling, be sure all o-rings are correctly located. Lubricate o-rings with Lithium grease. Bowl Baffle must be installed in correct orientation. Torque CFR Cap 55-65 in-lbs. Washer MUST be between Diaphragm Assembly and Dome. Torque Dome 190-210 in-lbs. Torque Drain Nut 5-15 in-lbs. Torque Bowl Ring hand tight.
14. If the Filter-Regulator cannot be repaired by cleaning with soap and water, the parts should be replaced.



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## Replacement Parts

DESCRIPTION	PART NUMBER
Float Drain Plastic Bowl Assembly	AF5A103-6M
Float Drain Metal Bowl Assembly	ABF5A103-117
Element Kit - 5µm	KA103-03PE5
Element Kit - 5µm bronze	KA103-03E5
Element Kit - 20µm bronze	KA103-03E4
Element Kit - 40µm bronze	KA103-03E3
Float Drain Kit	A802-42
Valve Assembly	A35-10M
Diaphragm Assembly	A37-03
Dome Assembly w/Panel Nut	A37-02P
Adjustment Knob Assembly	KA37-62
Panel Mount Nut & Bracket	K37-71
Panel Mount Nut	37-32
Gauge Port Wall Bracket	KA37-68
Gauge Port Extended Wall Bracket	KA37-68L



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## Parts Listing

KEY	DESCRIPTION
1	Key
2	Adjusting Knob
3	Adjusting Screw
4	Nut
5	Spring Rest
6	Main Spring
7	Dome </td
8	Washer
9	O-Ring
10	Diaphragm Assembly
11	Head
12	Pitot Tube
13	Valve Stem
14	Valve
15	Valve Spring
16	CFR Cap
17	O-Ring
18	O-Ring
19	Bowl Ring
20	Filter Element
21	Sleeve Assembly
22	Plastic Bowl
23	Bowl Baffle
24	Shatterguard
25	Float Drain
26	Drain Nut
27	Drain Knob
28	Drain Clip

