

Model F/FR-FM96/FLM96/LM96/LMA96 Series

Filter System F/FR-FM96/FLM96/LM96/LMA96

Description

The Filter/Coalescing filter /Desiccant Dryer or Activated-charcoal Filter is a three part system. The first stage Filter is design to remove most liquid and solid particles from the air supply. The second stage Coalescing filter is used to removes 99.9% of oil vapor particles. The third stage Desiccant Dryer reduces humidity in compressed air lines. Activated-charcoal Filter is for absorption of oil vapors and harmful gases, protecting the painter from the harmful vapors and gases.

Specifications

Max. Temperature . . . 60°C (140°F)

Auto drain:

Set Pressure . . . 30~175 psi (2.1~12 Bar)

Manual drain:

Set Pressure . . . 7~215 psi(0.5~14.8 Bar)

Air Inlet/outlet 1/2", 3/4", 1"

Gauge Ports 1/8"

Unpacking

After unpacking the unit, inspect carefully for any damage that may have occurred during transit. Make sure to tighten fittings, bolts, etc., before putting unit into service.

Safety Guidelines

This manual contains information that is very important to know and understand. This information is provided for SAFETY and to PREVENT EQUIPMENT PROBLEMS. To help recognize this information, observe the following symbols.

⚠ DANGER Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION Caution indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

General Safety Information

This product is a part of a high pressure system and the following safety precautions must be followed at all times along with any other existing safety rules.

Read this instruction manual before installing this device to the air supply system. Be thoroughly familiar with the controls and the proper use of the equipment.

1. Safety glasses must be worn during operation. Always work in a well ventilated area.
2. Do not exceed any pressure rating of any component in the system.
3. Protect air lines from damage and/or punctures.
4. Check air hoses for weak or worn condition before each use. Make sure all connections are secure.
5. Keep all nuts, bolts and screws tight and ensure equipment is in safe working condition.

⚠ DANGER

This product is specifically designed for compressed air service ONLY. Use with any other material (liquid or gas) is a misapplication and not permitted. Use or injection of certain hazardous liquids or gases in the system (such as oxygen, alcohol or liquid petroleum gas) will harm the unit and result in a combustible condition or hazardous external leakage. misapplication will void all warranties and manufacturer's responsibilities.

⚠ DANGER

The relief flow capacity of regulators is limited. Install additional pressure relief devices to alleviate over pressurized conditions. Written approval must be obtained from manufacturer if this device is to be used for life support systems or other non-industrial applications.

Installation

1. The assembly of all calibration shall meet the maximum flow requirement.
2. Direction air flow in the triangle "▷" on the primary unit.
3. Site as close to the unit to be protected as possible.
4. Place free of direct sun shine , hot area ,and hazardous chemicals.
5. The water drainage shall be deployed beneath the water discharge for outlet of water into proper area.

⚠ WARNING - ADVERTENCIA - AVERTISSEMENT
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Function / Maintenance

1. Pre - Filter: F / FR

- 1.1. Before pressurizing system, make certain the bowl is securely locked in place by hand tightening the bowl ring until it is snug.
- 1.2. Unlock the regulator adjusting knob by pulling knob away from the regulator.
- 1.3. Turn the regulator adjusting knob counterclockwise until no load is on the regulating spring.
- 1.4. Turn on the air pressure supply and turn the adjusting knob clockwise until the desired outlet pressure is reached. Push the regulator adjusting knob toward the regulator to lock in desired pressure.
- 1.5. The first filter stage separates particles $> 5\mu\text{m}$ as well as condensed water and oil.
The PE filter (part 7) is integrated in the filter, fineness $5\mu\text{m}$.
- 1.6. PE filter (part 7) and filter housings have to be cleaned after 6 months at the latest; replace PE filter, if necessary!

2. Micro - Filter: FM

- 2.1. The fine filter cartridge (part 18) of the second filter stage separates smallest particles.
- 2.2. The filter (part 18) fineness $0.1\mu\text{m}$, separation degree 99.998% related to a particle size $> 0.1\mu\text{m}$ and surface 300 cm^2 .
- 2.3. The filter (part 18) has to be replaced every 6 months at the latest or while the pressure difference is up to 0.8 Bar between two pressure gauges.
- 2.4. Drain bowls at least once per work shift. to avoid spray or splatter, cover bottom of filter with a cloth and turn the manual drain (part 17).

3. Dessiccant Dryer : LM

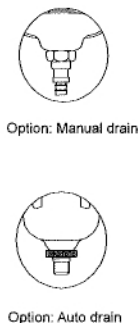
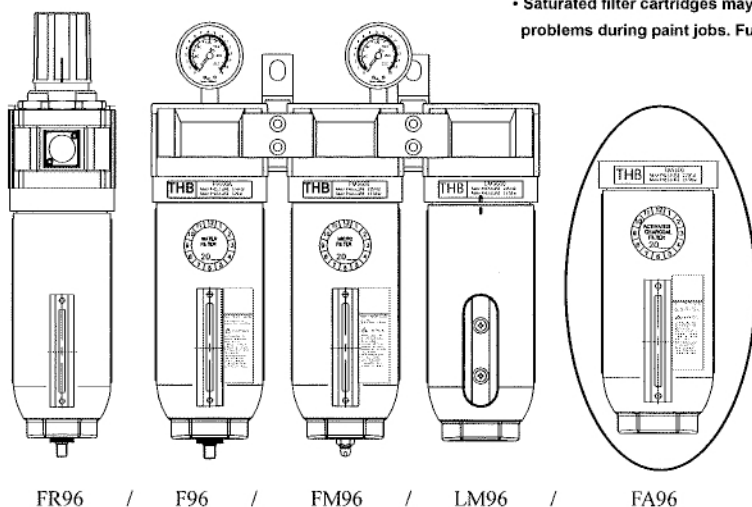
- 3.1. Shut off air flow to the air cleaner/dryer and depressurize system.
- 3.2. Remove bowl from the dryer housing by loosening the lock ring. Pull bowl down to remove from housing.
- 3.3. Pour out used desiccant.
- 3.4. Pour new desiccant into bowl, filling to within 1/2 of the top of the bowl.
- 3.5. Reinstall bowl on housing. Be sure it is securely locked in place before pressurizing the unit.

4. Activated - Charcoal - Filter: FA

- 4.1. The filter is with Charcoal for absorption of oil vapors. Must install after FM micro filter or F filter.
- 4.2. The filter has to be replaced every 6 months at the latest.

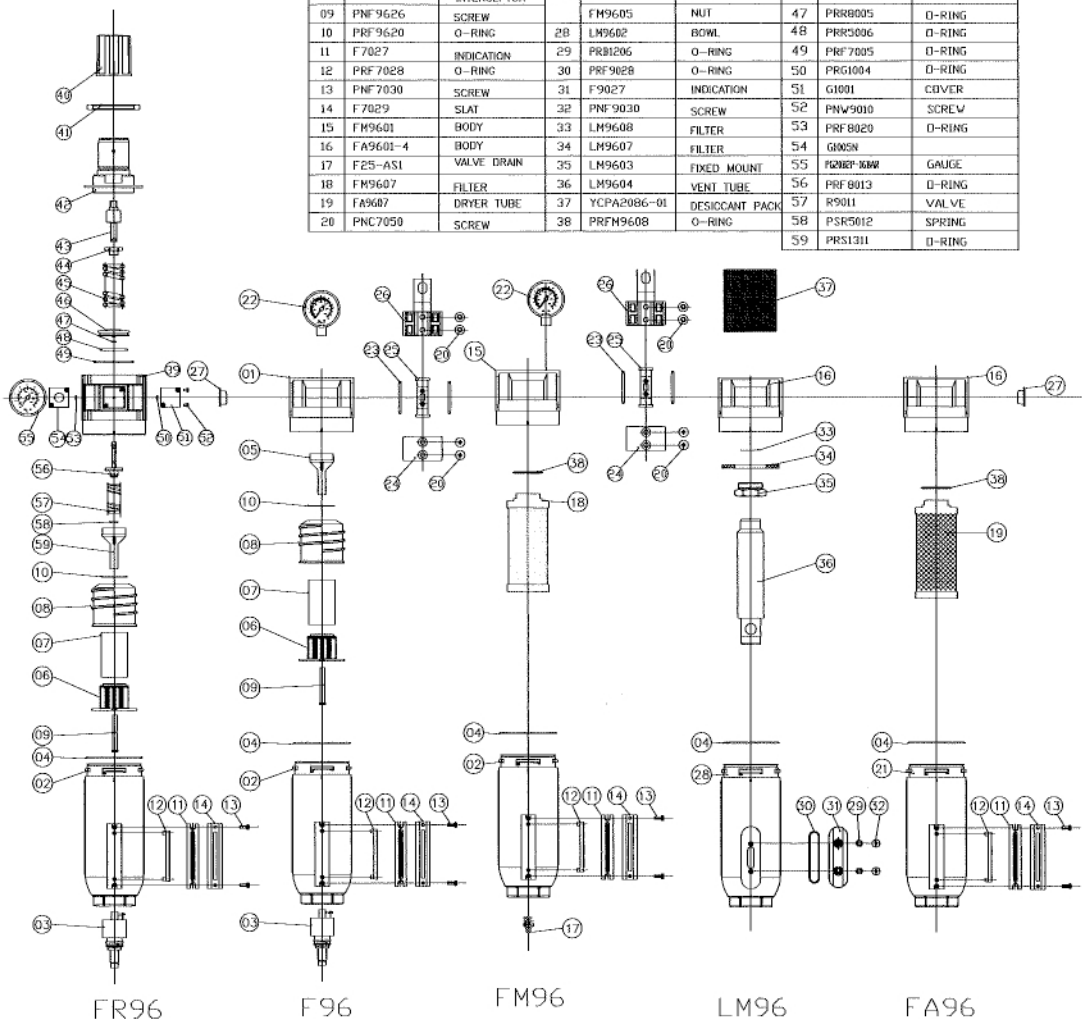
WARNING

- When the compressed air is heavily contaminated, the filter cartridges have to be exchanged in shorter intervals!
- Saturated filter cartridges may cause quality problems during paint jobs. Furthermore, using a



Assembly Drawing

NO.	PART NO.	DESCRIPTION	NO.	PART NO.	DESCRIPTION	NEL	PART NO.	DESCRIPTION
01	F9601	BODY	21	L9102	BOWL	39	W9001	BODY
02	F9102	BOWL	22	PG200-100W	GAUGE	40	R9010	KNIB
03	DS1-19	AUTO DRAIN	23	PRC9046	O-RING	41	R9018	
04	PRF9625	O-RING	24	C9047	JOINER	42	R9062	BORE
05	F9006-1	BOWL BAFFLE	25	C9048	JOINER	43	R9008	ADJUSTING BLOT
06	F9606	BOWL BAFFLE	26	C9049	JOINER	44	R9009	NUT
07	F9607	FILTER	27	FM9603	NUT	45	PSR5107	SPRING
08	F9608	INTERCEPTOR	28	FM9604	NUT	46	R5004-03	PISTON
09	PNF9626	SCREW	29	FM9605	NUT	47	PRR8005	O-RING
10	PRF9620	O-RING	30	LM9602	BOWL	48	PRR5006	O-RING
11	F7027	INDICATION	31	PRB1206	O-RING	49	PRF7005	O-RING
12	PRF7028	O-RING	32	PRF9028	O-RING	50	PRG1004	O-RING
13	PNF7030	SCREW	33	F9027	INDICATION	51	G1001	COVER
14	F7029	SLAT	34	PNF9030	SCREW	52	PNW9010	SCREW
15	FM9601	BODY	35	LM9608	FILTER	53	PRF8020	O-RING
16	FA9601-4	BODY	36	LM9607	FILTER	54	G800N	
17	F25-AS1	VALVE DRAIN	37	LM9603	FIXED MOUNT	55	PG200-100W	GAUGE
18	FM9607	FILTER	38	LM9604	VENT TUBE	56	PRF8013	O-RING
19	FA9607	DRYER TUBE	39	YCPA2086-01	DESICCANT PACK	57	R9011	VALVE
20	PNC7050	SCREW	40	PRFM9608	O-RING	58	PSR5012	SPRING
						59	PRB1311	O-RING



Limited Warranty

1. DURATION: From the date of purchase by the original purchaser as follows: One Year.
2. WHAT IS COVERED UNDER THIS WARRANTY: Substantial defects in material and workmanship which occur within the duration of the warranty period.
3. WHAT IS NOT COVERED UNDER THIS WARRANTY :
 - A. Implied warranties, including those of merchantability and fitness for a particular purpose are limited from the date of original purchase as stated in the duration. If this product is used for commercial, industrial or rental purposes, the warranty will apply for ninety (90) days from the date of purchase. Some States do not allow limitation on how long an implied warranty lasts, so the above limitations may not apply to you.
 - B. Any incidental, indirect, or consequential loss, damage, or expense that may result from any defect, failure, or malfunction of the product. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
 - C. Any failure that results from an accident, purchaser's abuse, neglect or failure to operate products in accordance with instructions provided in the owner's manual(s) supplied with product. Accident, purchaser's abuse, neglect or failure to operate products in accordance with instructions shall also include the removal or alteration of any safety devices. If such safety devices are removed or altered, this warranty is void.
 - D. Normal adjustments which are explained in the owner's manual(s) provided with the product.
 - E. Items or service that are normally required to maintain the product, i.e. o-rings, springs, bumpers, debris shields, driver blades, fuses, batteries, gaskets, packing or seals, fluid nozzles, needles, sandblast nozzles, lubricants, material hoses, filter elements, motor vanes, abrasives, blades, cut-off wheels, chisels, chisel retainers, cutters, collets, chucks, rivet jaws, screw driver bits, sanding pads, back-up pads, impact mechanism, or any other expendable part not specifically listed. These items will only be covered for ninety (90) days from date of original purchase. Underlined items are warranted for defects in material and workmanship only.
4. RESPONSIBILITIES OF WARRANTOR UNDER THIS WARRANTY: Repair or replace, at warrantor's option, products or components which are defective, have malfunctioned and/or failed to conform within duration of the warranty period.
5. RESPONSIBILITIES OF PURCHASER UNDER THIS WARRANTY:
 - A. Provide dated proof of purchase and maintenance records.
 - B. Deliver or ship the product. Freight costs, if any, must be borne by the purchaser.
 - C. Use reasonable care in the operation and maintenance of the products as described in the owner's manual(s).