

AIR PREPARATION EQUIPMENT PRECAUTIONS

SAFETY INSTRUCTIONS | Read carefully before handling.

PRODUCT SELECTION



WARNING

AIR FILTER ENVIRONMENT

Standard Filters/Regulators incorporate polycarbonate bowls and/or observation windows. Do NOT use filters in an environment that will expose the above components to synthetic fluids, organic solvents, chemicals, cutting lubricants, thread lock solutions or similar materials.

REGULATOR

- a) Safety devices shall be placed to prevent secondary (output) pressure from raising past the set pressure. This will ensure that damage to the components on the secondary side will be minimized in the event of a malfunction.
- b) Residual pressure will remain on secondary side of regulators when supply is removed. This condition will enable equipment to operate unless system is designed to relieve (exhaust) this pressure; i.e. designer should add components that will exhaust secondary side when supply is removed.
- c) Regulator operation may be affected when used in Balanced or Secondary sealed circuits.

LUBRICATORS

For proper lubricator function, airflow must meet or exceed its minimum flow rate.

DRAINS

For proper Auto Drain operation, the following should be considered:

- a) FLOAT TYPE AUTO DRAIN (N.O.)
 1. Operating pressure must be greater than 0.1 MPa.
 2. Compressor capacity is greater than 0.75kw [100 l/m (ANR)]
- b) FLOAT TYPE AUTO DRAIN (N.C.)
 1. Operating pressure must be greater than 0.15 MPa.
 2. Compressor capacity may be less than 0.75kw [100 l/m (ANR)]
- c) DIFFERENTIAL PRESSURE TYPE AUTO DRAIN
 1. Operating pressure must be greater than 0.1 MPa.

PRODUCT INSTALLATION



CAUTION

FILTERS / LUBRICATORS

- a) INSTALL FILTERS AND LUBRICATORS WITH BOWLS IN DOWNWARD DIRECTION. Improper orientation may cause drain malfunctions and make it difficult to check lubricator drip rate.
- b) VERIFY FLOW DIRECTION BEFORE MAKING CONNECTIONS. Reversing connections will cause improper operation.
- c) INSTALL AUTO DRAIN PIPING CORRECTLY.
 1. ALL TYPES
 - (1) Piping slope shall always fall away from drain without low spots.
 2. FLOAT TYPE AUTO DRAIN (N.O.)
 - (1) Drain hose inner diameter shall be 6.5mm or greater.
 3. FLOAT TYPE AUTO DRAIN (N.C.)
 - (1) Drain hose inner diameter shall be 4mm or greater.
 4. DIFFERENTIAL PRESSURE TYPE AUTO DRAIN
 - (1) Drain hose inner diameter shall be 2.5mm or greater.
 - (2) Drain hose material shall be soft nylon.
- d) AIR SUPPLY. If excessive filter drainage occurs install air dryer and water separator before air filter.

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PRODUCT SELECTION

CAUTION

REGULATORS

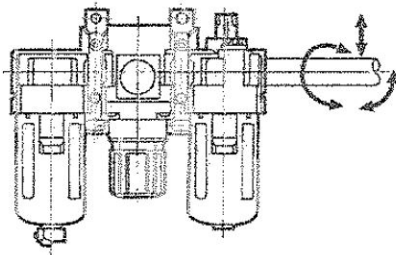
- a) **ADJUST PRESSURE SETTINGS.** Start adjustment from lower than desired pressure level, increase pressure until desired pressure is reached, lock handle to fix setting.
- b) **PRESSURE STABILITY.** Set the secondary pressure of regulator within 85% of nominal supply pressure. This will ensure secondary pressure stability despite nominal supply side pressure variations; e.g. sudden pressure drops.

INPUT / OUTPUT PIPING

- a) Always tighten within recommended torque limits (see table). Insufficient or excessive fastening torque may result in leaks and/or damage to threads.

Connection Thread	M%	1/8	1/4	3/8	1/2	3/4	1
Torque		1.5-2	7-9	12-14	22-24	28-30	36-38

- b) Always retain female side closest to connection when tightening pipe/fittings to avoid damage to modular connection brackets.
- c) F.R.L. components must be isolated from external twist and/or bend moments (see diagram). Proper support of rigid input/output lines must be provided if flexible lines are not used.

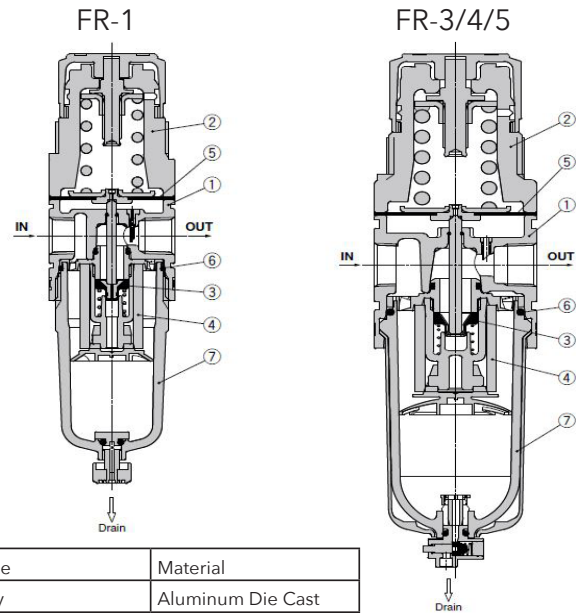


CAUTION

- 1. All clear materials should be examined regularly for scratches, cracks, or degradation; e.g. polycarbonate bowls or drip observation windows.
- 2. Dirt must not be allowed to accumulate on or in filters, bowls, or observation windows.

- a) Clean with common household detergent.
 - b) Replace bowl if dirt near cannot be removed (may obstruct drain).
3. Liquid in bowl must not exceed maximum levels. Failures to purge liquids via drain, may result in liquids entering secondary side. This may cause equipment damage.
 - a) Float type drains may be manually drained by turning handle counter-clockwise.
 - b) Differential type drains may be manually drained by pushing the drain guide in an upward motion.
 4. Only use turbine class 1 lubrication oil (W/ additive) ISA VG32 in lubricators.

CONSTRUCTION / PARTS LIST



Name	Material
1 Body	Aluminum Die Cast
2 Bonnet	Polyacetal
Component Parts List	
3 Valve Assembly	HNBR
4 Element	Polyolefin
5 Diaphragm Assembly	Weatherproof NBR
6 Bowl Packing	NBR
7 Bowl Assembly	Polycarbonate
8 Bracket Assembly	Steel plate / Polyacetal
9 Set Nut	Polyacetal

Replacement Filter Elements	
Yamada #	SMC #
FR-1	AF20P-060S
FR-3	AF30P-060S
FR-4	AF40P-060S
FR-5	AF40P-060S