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Richland, MI 49083

Installation & Service Instructions: 83-947-000

SM1 & SM2 Coalescing Filter

ISSUED: May, 2008 Supersedes: August, 2006

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/!\ WARNING

- To avoid unpredictable system behavior that can cause personal injury and property damage:
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer's specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

Safety Guide

For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the Pneumatic Division Safety Guide at: www.wilkersoncorp.com

Introduction

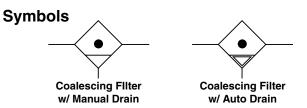
Follow these instructions when installing, operating, or servicing the product.

Application Limits

These products are intended for use in general purpose compressed air systems only.

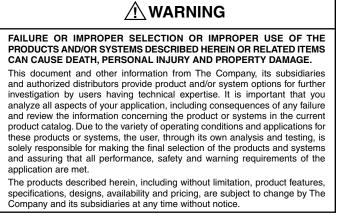
Maximum Recommended Pressure Drop:

			•	
		kPa	PSIG	bar
Coalescing Filter		70	10	0.7
Operating Pressure Maximum		kPa	PSIG	bar
Bowl w/ Twist Drain / No Sight Ga	auge	2068	300	21.0
Bowl w/ Autodrain / No Sight Gauge		1210	175	12.1
Bowl w/ Twist Drain and Sight Gauge		1700	250	17.0
Bowl w/ Autodrain and Sight Gau	ıge	1210	175	12.1
Operating Temperature Range:				
SM1 –				
Manual Twist Drain	0°F to	o 180°F	(-18°C to) 82°C)
Auto Pulse Drain			°F (0°C to	,
SM2 –				
Manual Twist Drain				
(Without Sight Gauge)	0°F to	180°F	(-18°C to	82°C)
Manual Twist Drain			(/
(With Sight Gauge)	0°F to	150°F	(-18°C to	66°C)
Automatic Float Drain			F (0°C to	,
Note: Air must be dry enough to avoid i			•	,
below 32°F (0°C).				
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Installation

- 1. The filter should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction. Also, new pipe or hose should be installed between the filter and equipment being protected.
- 2. The upstream pipe work must be clear of accumulated dirt and liquids.
- 3. Select a filter location as close as possible to the equipment being protected and upstream of any pressure regulator.
- 4. A 5 micrometer pre-filter is recommended to protect the high efficiency filter and to prolong the element's life.
- 5. Install filter so that air flows in the direction of arrow on body.
- 6. Install filter vertically with bowl drain mechanism at the bottom. Free moisture will thus drain into the sump "quiet zone" at the bottom of the bowl.



EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.

SM1 & SM2 Coalescing Filter

Operation

- 1. Both free moisture and solids are removed automatically by the filter.
- 2. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the baffle or end cap.
- 3. The filter element should be removed and replaced when pressure differential across the filter is 69 kPa (10 psig).

Service Procedure

- A Caution: Shut off air supply and exhaust the pressure trapped within the filter bowl before servicing unit.
- A Caution: Touching or handling the new element section may cause contamination, spotting, or migration of oil.
- 1. Unscrew and remove bowl.
- 2. Unscrew the filter holder from body and then remove element.
- 3. Clean all internal parts and bowl before reassembling.
- 4. The coalescing filter element should be removed and replaced when pressure differential across the filter is 10 PSID. Differential gauges should be used to determine when the maximum recommended pressure differential has been reached.
- 5. Attach filter holder and finger tighten firmly.
- 6. Replace bowl seal. Lightly lubricate new seal to assist with retaining it in position.
- 7. Install bowl into body and tighten; hand tight, plus 1/4 turn.
- 8. After servicing, apply system pressure and check for air leaks. If leakage occurs, DO Not Operate — conduct servicing again.

Filter Body (

Bowl Seal (C

Element

Bowl

(Hand Tighten)

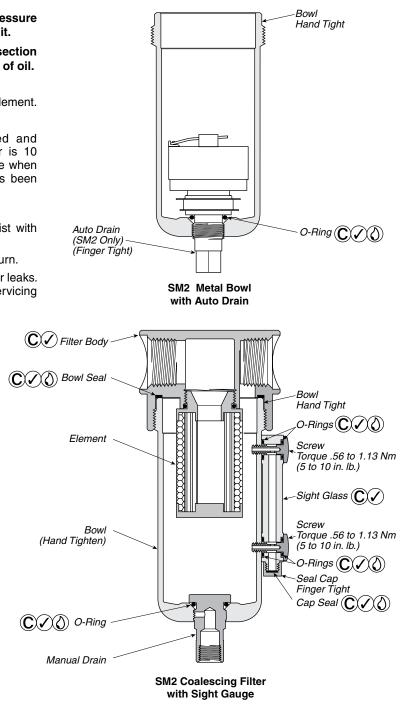
Auto Pulse Drain

(Finger Tight)

O-Ring (C)

Service Kits Available

Description	SM1	SM2	
Auto Drain	—	SRP-96-027	
Auto Pulse Drain	RK504SY-SS	—	
Element (.3 Micron)	SRP-96-005	SRP-96-006	
Manual Drain	SAP05481	SAP05481	
Sight Glass	_	SRP-96-026	



Lightly grease with provided lubricant.

SM1 Coalescing Filter

with Auto Pulse Drain

Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.

C Clean with lint-free cloth.