

## INSTALLATION

General filters should be installed in a level pipeline, mounted vertically with the bowl downward with one bowl length clearance for element removal. The filter should be installed at the highest pressure point available, and as near as possible to the equipment to be protected and have a drip leg immediately upstream. The coalescers and particulate filters should be visible and easily accessible for periodic draining and maintenance.

The filters should be piped in accordance with the instruction tags, flow arrows or "IN" and "OUT." Should these tags become unreadable, install the coalescer so that flow passes through the filter tube from inside-to-outside. Plumb particulate and adsorber filters so that flow passes through the filter from outside-to-inside. The various filter locations relative to other equipment should be as follows (unless specific instructions are given to the contrary): (1) COALESCERS and WATER SEPARATORS are placed before the dryer. (2) The INTERCEPTOR (Particulate) goes ahead of the COALESCER when pre-filtration is required. (3) The INTERCEPTOR is installed downstream of desiccant dryers to prevent desiccant migration. (4) The ADSORBER is always preceded by a COALESCER.

When Coalescer or Interceptor differential pressure reaches clogged condition (6-10 PSID) replace element immediately. DO NOT ATTEMPT TO CLEAN FILTER TUBE. System contamination can result. DO NOT ATTEMPT TO RESEAT A FILTER TUBE. New serrated indentations can be formed causing leakage. DO NOT BY-PASS THE COALESCER unless the by-pass line is also filtered.

## OPERATION

Air coalescing is a continuous, balanced, steady-state process occurring at or below rated flow, which depends on two factors for high performance: (1) The bowl must be kept free of waste liquid build-up and (2) The element must be replaced when the differential pressure reaches 6-10 psid, 12 psid maximum. Differential pressure can be sensed at the inlet and outlet ports by two gages, or by Finite's DPI-13 differential pressure indicator, DPG-15 differential pressure gauge, or by observing system characteristics.

Bowl draining is accomplished by opening the manual drain valve (standard on all housings), at least once every 8 hours depending on the liquid load. The Auto-Drain AD-12 is a useful tool that replaces manual draining. Finite's timed drain valve can be used to drain the bowl automatically.

A General coalescer, under normal system conditions, will operate for 6 to 12 months before reaching its maximum differential pressure. A "PU" series Interceptor, or a "QU" series coalescing element with a pleated prefilter can be employed ahead of the coalescer to increase its life. The interceptor should be replaced when its differential pressure reaches 8 - 10 psid.

General coalescers are designed for nominal operation with 10-20 wt. oil. Any viscosity increase over that of 20 wt. oil must be offset by a proportionate oversizing of the filter element.

## TROUBLESHOOTING CHART

PROBLEM	PROBABLE CAUSE	SOLUTION
Too High Initial Pressure Drop	Air flow excessive for housing size. Filter media grade too fine.	Install larger filter. Install coarser element.
	Too much oil/water from compressor.	Pre-coalesce with grade 10 - oversize housing.
Premature Clogging (Air Flow Drops Off)	Lubricant improperly selected for compressor, causing varnish or carbonizing of lubricant.	Change oil, consult with lubricant supplier.
	Excessive inlet particulate contamination.	Prefilter with Interceptor.
	Excessive lubricants present on element caused by either high lubricant viscosity or very high inlet aerosol level.	Prefilter with Grade 10 and oversize coalescer to compensate.
	Oil/water emulsion forming on element.	Remove water by drip leg, aftercooler. Install mechanical separator upstream.
	Ice forming or oil viscosity too high due to excessively low unit temperature.	Raise temperature.
Oil Present Downstream of Filter	Bowl not properly drained of waste liquids.	Drain regularly, use auto drain.
	Element not sealing.	Replace element.
	Filter piped backwards.	See "INSTALLATION"; Re-pipe.
	Filter being by-passed by valving.	Close valve.
	Contaminated air entering system from second source downstream.	Change pipe or relocate filter.
	Oil vapors condensing downstream.	Install an adsorber.
	Excessive inlet oil level.	Precoalesce with Grade 10 and possibly oversize.
	Element damaged, chemically attacked or not installed in housing.	Change and consult distributor or factory for other than neutral pH.
Oil present in pre-contaminated downstream piping.	Clean piping.	
	Excessive flow surges.	Relocate filter, pre-coalesce with grade 10 and oversize coalescers.