



## COALESCING SYSTEMS

### LIQUID / LIQUID SEPARATION

#### **COMPACT, ECONOMICAL LIQUID SEPARATION SYSTEMS FOR USE WITH NON-EMULSIFIED SOLUTIONS UP TO 150°F.**

**SERFILCO Coalescing Systems** are compact, economical, and simple to operate. Remove oils from rinse waters, cleaning solutions, plating solutions or waste effluents. Separate water or tramp oil from hydraulic fluids and machining coolants.

Highly effective; systems separate non-emulsified fluids having a .09 or greater difference in specific gravity. Solution is pumped through prefilter, then coalescing element where small droplets are held until large enough to float to top of coalescing chamber. Light phase is discharged from top of coalescing chamber, heavy phase is discharged from bottom of coalescing chamber. Unwanted phase is periodically bled off via manual flow control valve. Purified solution is directed back to tank or reservoir for re-use. Recovered effluent contains less than 10 ppm of the discontinuous phase. Carbon purification may be used to polish.

Standard coalescing systems include pump\*, prefilter and coalescing chamber with manual light and heavy phase discharge valves. Prefilter media of 5 to 10 micron is required to protect coalescing element. Selecting a system with greater prefilter capacity will reduce prefilter cartridge and coalescing element consumption. If properly protected, coalescing element has indefinite life. Coalescing of fluids with excessive particulate loading is best accomplished when solution is first clarified with separate filtration system.

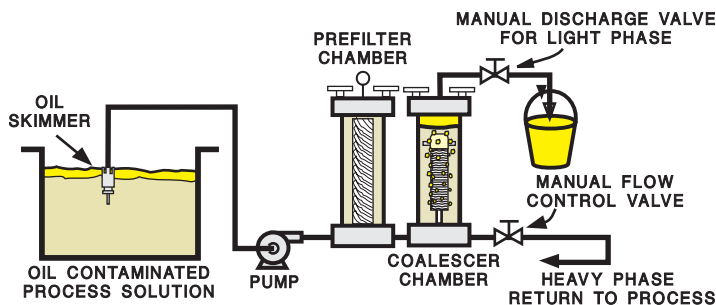
\* Standard pumps are low shear positive displacement: rotary gear or diaphragm. These pumps minimize emulsification and have self-priming capabilities. For removal of floating or light phase, pump suction must be connected to overflow weir or optional skimmer assembly. For removal of heavy phase solution, suction connection near tank bottom is recommended.



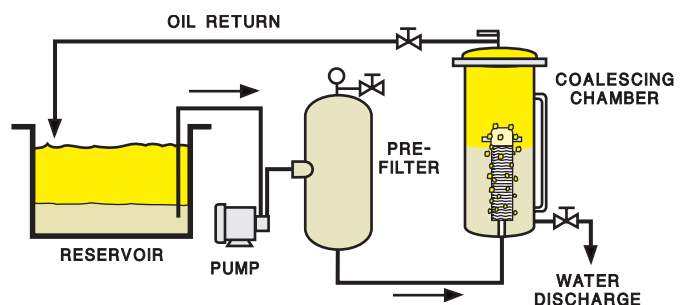
Plastic System

Steel System

### OIL SEPARATION FROM AQUEOUS RESERVOIR



### WATER SEPARATION FROM OIL RESERVOIR





## PLASTIC COALESCING SYSTEMS

Plastic coalescing systems are best suited for separation of oil from aqueous based solutions. Non-metallic solution contact allows a wide range of chemical compatibility.

### Plastic Coalescing systems include:

- Plastic prefilter chamber and coalescer with EPDM gaskets
- Polypropylene air operated diaphragm pump with Teflon® internals.
- Air pressure regulator
- Light and heavy phase discharge valves on coalescer
- Corrosion resistant mounting plates
- Pump will run dry and self primes to 10ft.

FLOW		SYSTEM	SCFM @ PSI	PUMP	PREFILTER		COALESCER		DIMENSIONS L x W x H Inches	SHIPPING WEIGHT Lbs.
GPH @ 60 Hz	LPH @ 50 Hz				MEDIA/ CHAMBER SERIES	MATERIALS OF CONST. BASE / SHELL	MEDIA / CHAMBER	MATERIALS OF CONST. BASE / SHELL		
300	1363	S-1386A	2 @ 40	PPTF½"	1-20" / L	PVC/clear PVC	1-2.5"x10" / L	PVC/clear PVC	19" x 10" x 33"	70
300	1363	S-1387	2 @ 40	PPTF½"	1-20" / L	polypropylene	1-2.5"x10" / L	polypropylene	19" x 10" x 33"	70
600	2271	S-1388	10 @ 40	PPTF1"	3-10" / S	polypropylene	1-2.5"x10" / S	PP/clear PVC	29" x 10" x 33"	80
600	2271	S-1389	10 @ 40	PPTF1"	3-10" / S	polypropylene	1-2.5"x10" / S	polypropylene	29" x 10" x 33"	80
600	2271	S-1390	10 @ 40	PPTF1"	3-20" / S	polypropylene	1-2.5"x10" / S	polypropylene	29" x 10" x 33"	90
1500	5678	S-1391	30 @ 80	PPTF1"	3-20" / S	polypropylene	1-6"x11" / G	polypropylene	33" x 18" x 33"	100
1500	4578	S-1392	30 @ 80	PPTF1"	3-30" / S	polypropylene	1-6"x11" / G	polypropylene	33" x 18" x 43"	100

## METAL COALESCING SYSTEMS

Metal Coalescing Systems are best suited for removing oil from synthetic machining fluids, oils from alkaline solutions or trace water from petroleum base fluids.

### Metal Coalescing systems include:

- Metallic prefilter chamber and coalescer with Buna-N gaskets
- Light and heavy phase discharge valves and sight glass on coalescer
- Corrosion resistant mounting base
- Air operated systems  
Polypropylene air operated diaphragm pump with Teflon® internals  
Pump will run dry and self primes to 10 ft.
- Electric operated system  
Cast iron gear pump. Pump will self prime to 10 ft.  
115V/1/60, TEFC, 1725 RPM motor with 8 ft of 3-wire cord and plug



## AIR OPERATED METAL COALESCING SYSTEMS

FLOW		SYSTEM NUMBER	SCFM @ PSI	PUMP	PREFILTER		COALESCER		DIMENSIONS L x W x H Inches	SHIPPING WEIGHT Lbs.
GPH @ 60 Hz	LPH @ 50 Hz				MEDIA	MATERIALS OF CONST.	MEDIA	MATERIALS OF CONST.		
480	1363	S-1283	5 @ 50	PPTF½"	5-10"	carbon steel	1-4" x 11"	carbon steel	42" x 13" x 37"	150
480	2271	S-1284	5 @ 50	PPTF½"	5-20"	carbon steel	1-4" x 11"	carbon steel	42" x 13" x 37"	160
600	5678	S-1285	10 @ 40	PPTF1"	5-30"	carbon steel	1-4" x 11"	carbon steel	42" x 13" x 37"	170

## ELECTRIC OPERATED METAL COALESCING SYSTEMS

FLOW		SYSTEM NUMBER	PUMP HP, MODEL	PREFILTER		COALESCER		DIMENSIONS L x W x H Inches	WEIGHT Lbs.
GPH @ 60 Hz	LPH @ 50 Hz			MEDIA	MATERIALS OF CONST.	MEDIA	MATERIALS OF CONST.		
180	567	S-1277	1/3, TS3	5 - 10"	carbon steel	1-4"x11"	carbon steel	42" x 13" x 37"	175
360	1134	S-1278	1/2, TS6	5 - 20"	carbon steel	1-4"x11"	carbon steel	42" x 13" x 37"	195
540	1701	S-1279	1, TS9	5 - 30"	carbon steel	1-4"x11"	carbon steel	42" x 13" x 37"	215

### OPTIONAL

DESCRIPTION	PRICE CODE NO.
Motor starter Model -ST4	0-MS1P
Portable - 2 wheels and 2 legs on standard mounting base (metal & plastic systems)	O-0191
Sight glass for 1500 GPH coalescing chamber	O-1435
Viton® chamber elastomers / Viton impeller (J-pumps)	Add -V to System No.

### COALESCING MEDIA

MODEL	MATERIAL DESCRIPTION Media, Core, End Caps*	DIMENSIONS I.D. x O.D. x Length	PRICE CODE NUMBER
K2.5 x 10N K2.5 x 10P K2.5 x 10G	Nylon, polypropylene, EPDM Polypropylene, polypropylene, EPDM Glass, polypropylene, EPDM	1" x 2.5" x 10"	88-3245 88-3246 88-3247
K4 x 11N K4 x 11P K4 x 11G	Nylon, 304 stainless steel, Buna-N Polypropylene, 304 stainless steel, Buna-N Glass, 304 stainless steel, Buna-N	1.8" x 4" x 11"	88-3248 88-3249 88-3250
K6 x 11NPP	Nylon, Polypropylene, Buna-N	3" x 6" x 11"	88-0816

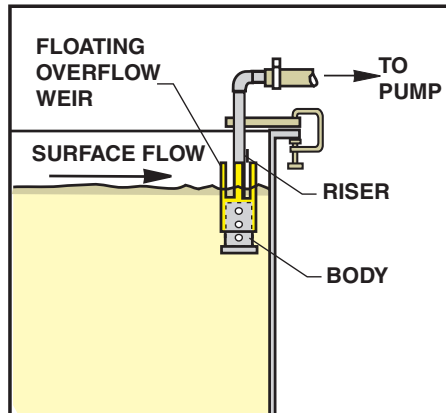
\* Viton® end caps (4 x 11 size only). Minimum order carton quantity. Add -V to Model and Price Code Number.  
Note: Carton quantity: 25 of 10", 10 of 11".



## PREFILTER MEDIA

MICRON	MEDIA	LENGTH (Inches)	CORE	PRICE CODE NO.
5	polypropylene	10	polypropylene	05U10U
5	polypropylene	20	polypropylene	05U20U
5	polypropylene	30	polypropylene	05U30U
10	polypropylene	10	polypropylene	10U10U
10	polypropylene	20	polypropylene	10U20U
10	polypropylene	30	polypropylene	10U30U
5	bleached cotton	10	tinned steel	05C10T
5	bleached cotton	20	tinned steel	05C20T
5	bleached cotton	30	tinned steel	05C30T
10	bleached cotton	10	tinned steel	10C10T
10	bleached cotton	20	tinned steel	10C20T
10	bleached cotton	30	tinned steel	10C30T

## SKIMMER ASSEMBLY



### REMOVES FLOATING OILS OR PARTICULATES

- Constructed of CPVC with polypropylene floating meir.
- To select skimmer:
  1. Determine tank liquid level differential  
This will minimize dry pump operation.
  2. Use skim rate as guideline for sizing

MODEL NUMBER	LIQUID LEVEL DIFFERENTIAL	SKIM RATE GPH	CULET HOSE CONN.	RISER	BRACKET	PRICE CODE NO.
				LENGTH	1/2" THICK	
SK 1/2	2"	to 300	1/2"	13"	4" x 2"	99-0479
SK 3/4	3"	to 600	3/4"	18"	4" x 2"	99-0498
SK 1	4"	to 900	1"	18"	6" x 2"	99-0480

Assembly include mounting bracket, adjustable riser and "C" clap.