

# Industrial Fluid Filtering & Recycling

Coolant Recycling
Oil Separators
Suction Skimmers
Magnetic Separators
Portable Filtration Systems
Accessories



# CoolantLoop Recycling System

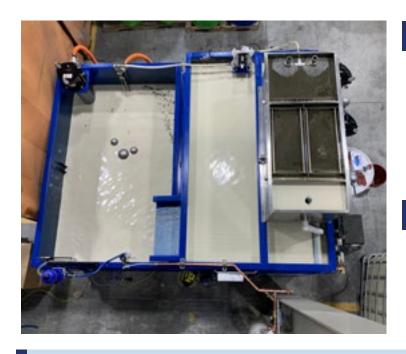
Coolant Recycling Equipment

### **Applications**

Capturing and separating tramp oils from machining fluids

Sentry's CoolantLoop quickly promotes the capture and separation of contaminated floating oils and suspended solids from your valuable machining coolants. With the correct processes in place, your coolant life can be extended exponentially.

By getting the fluids out of dirty sumps on a regular basis, all three types of coolant contamination problems – tramp oils, solids, and bacteria – can easily and effectively be removed. Our SmartSkim products incorporate open-channel coalescing and skimming technologies to ensure this occurs.





### Benefits

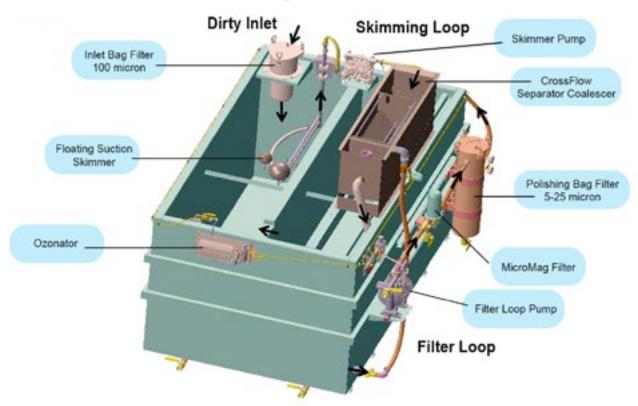
- Reduces the cost of new coolant concentrate purchases by 35% to 65%
- Cut your cost of dirty coolant disposal by 50% to 90%
- Better control of coolant concentration levels
- Eliminate environmental risks and the liability of off-site disposal

#### **Features**

- Dual compartment processing tank allows for dirty coolant storage and a constant clean coolant supply
- Floating suction skimmers are included for the most effective skimming of tramp oils
- Filtration down to 5-10 micron range

Model	Tank Size Clean/Dirty Side	Oil Separator	Dimensions (in) L x W x H
CL400	200 gal / 200 gal	CrossFlow	62" x 70" x 77"
CL800	400 gal / 400 gal	CrossFlow	76" x76" x 83"
CL1200	600 gal / 600 gal	CrossFlow	105" x 76" x 83"
CL2400	1200 gal / 1200 gal	CF20	105" x 138" x 83"

# **Coolant Recycler Process Flow**



## **Optional Equipment**

# Magnetic separator

Rare-earth magnetics for the Inlet Filter and/or on the FilterLoop for filtration down to 1 micron of ferrous fines.

# **■** Coolant Proportioner

While a coolant proportioner is included as a standard feature on our recyclers, we also offer precision metering proportioners that ensure a greater level of coolant concentration control.

# Sump Cleaner/Coolant Dispenser

Allows for the quick removal and easy transport of coolants to/from the sumps and our SmartSkim Recycler.

# Hose Reels

Assist in the distribution of recycled coolant back to your sumps. One hose reel can effectively serve multiple machining centers.

## Site Requirements

### Air

Systems need 30 PSI of clean, dry plant air. Entire system uses approximately 5-15 SCFM of air.

### Electric

Ozonator supplied with standard 120V plug. (240V available upon request)

### Water

3/4" NPT water line at 40PSI for coolant makeup proportioner.

# Maintenance

System should be cleaned periodically as needed depending on contamination loading, type of coolant used, pre-filtration available, and maintenance practices of plant. Total system cleaning of once per year is recommended.



# CrossFlow Oil Separator

Oil Separators

### **Applications**

Any use where the separation of two immiscible fluids is required

The CrossFlow Oil Separator is designed as a simple, trouble-free solution for removing free floating and mechanically dispersed tramp oils from wash tanks, individual machine coolant sumps, central coolant systems, and many other manufacturing process fluids.

Based on gravity flow and coalescence, the CrossFlow Oil Separator can reduce tramp oils to less than 1% in a single pass. It's "non-clogging" design allows for the separation of oils and settling of solids in one step.





#### **Benefits**

- Reduces waste volumes by 50 to 90%.
- Improves sump life, tooling, and parts quality in CNC operation.
- Manages environmental waste, bacteria levels, and associated odors.
- Reduces new fluid purchases by extending industrial fluid longevity.

#### **Features**

- Low maintenance technology requires less frequent cleaning
- Sloped bottom design allows for easy removal of solids and sludge
- Automated system for continuous operation
- 304 stainless steel coalescing plate pack

Model	Max. Flow Rate	Process Pressure	Process Temperature	Dimensions (L x W x H)
CF10	10 GPM	30 PSI	Up to 250° (121°C)	48" x 14" x 24"
CF20	20 GPM	30 PSI	Up to 250° (121°C)	60" x 28" x 28"



# Sump Caddy

Portable Filtration Systems

# **Applications**

A portable filtration solution to a labor intensive skimming process

Remove free floating tramp oils and suspended fine particulates from your machine sumps with the Sump Caddy Portable Filtration System. This portable system ensures that you are extending your fluid life and eliminating labor intensive skimming processes.

A complete system comes with a V1.5 Vertical Coalescer, Slotted Pipe Suction Skimmer, 100-micron or 250-micron pre-filter bags, and 10 feet of suction and discharge hoses. For ferrous cutting operations, a MagSleeve or MagPost magnetic filter can be included for additional particulate removal.







#### **Benefits**

- Reduces coolant disposal costs and eliminates labor intensive processes.
- Extends the life of your expensive machining coolants and improves your part quality.
- Removes tramp oil contamination that is a breeding ground for dangerous and odorous bacteria



#### **Features**

- Portable Engineered to be easily moved around
- Runs on plant air, no electricity needed
- Carbon steel bag filter housing, stainless steel V1.5 coalescer
- Requires minimal maintenance
- Easy to use and understand, no intensive training required

Model	Fluid Processing Rate	Max. Sump Height	Dimensions (L x W x H)
Sump Caddy	.75—1.5 GPM	35"	30" x 26" x 47"



# V Series Oil Separator

Oil Separators

# **Applications**

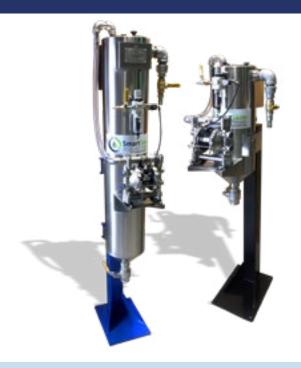
Any use where the separation of two immiscible fluids is required

Minimize floor space and maximize your industrial processes with the Sentry V Series Vertical Oil Separator. This coalescing separator is designed to simply remove free-floating and mechanically dispersed tramp oils from wash tanks and other manufacturing process fluids.

Inside the SmartSkim V Series Separator, there are no plastic coalescer media, filters, or consumables of any kind. Our proprietary open channel system separates and removes floating oils and solids by gravity only. This makes maintenance fast and easy.







#### **Benefits**

- Reduces new fluid purchase costs by up to 75% by extending the life of those fluids
- Reduces waste volumes by up 50-90%
- Minimizes the cost of wash water detergent, heating, and disposal costs.
- Reduces misting and smoke, environmental waste disposal, and bacteria levels

#### Features

- Low maintenance and non plugging
- Stainless steel construction
- Designed for easy removal of solids and sludge
- Automated system for continuous operation
- Suction skimmer is included
- Entirely pneumatic and can run on plant air

Model	Fluid Processing Rate	Plant Air	Overall Height
V1.5	.75—1.5 GPM	1-3 CFM	66"
V3	1—3 GPM	1-3 CFM	71"



# J-Tube Skimmer

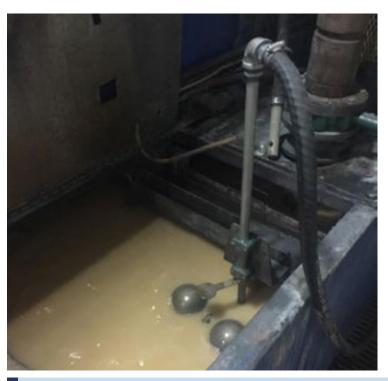
Oil Separators

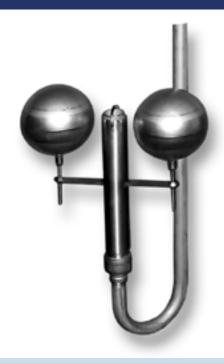
# **Applications**

Where skimming oil off of the top surface of a fluid is required

Remove free-floating and mechanically dispersed tramp oils from fluid surfaces with Smartskim's J-Tube Floating Oil Skimmer. The skimmers work in any application where skimming oil off of the top surface of a fluid is required.

Applications include but are not limited to wash tanks, individual machine sumps, central coolant systems, machine pits, and wastewater treatment tanks. The floating skimmer utilizes a universal bracket to change positions as fluid levels adjust, assuring consistent and continuous skimming.





#### **Benefits**

- No belts, drums, or hoses minimizing the chance of clogging
- Can be used with virtually any coolant or cleaner and requires minimal maintenance

#### **Features**

- Durable stainless steel construction with no hoses that kink, harden, or collapse
- Easily set with minimal adjustments

#### Models

Model	Min.—Max. Suction Levels	Connection Size	Dimensions (L x W x H)
3.5"	6 1/2"—10"	1/2" NPT	9.875" x 7.25" x 21"
7"	14.75"—21.75"	1" NPT	12.625" x 10.25" x 43.75"
17"	22"—39"	1" NPT	13.125" x 14.875" x 56"



# Tri-Float Skimmer

Oil Separators

# **Applications**

Where skimming oil off of the top surface of a fluid is required

Our Tri-Float Skimmers are designed as a simple, trouble-free solutions for removing free floating and mechanically dispersed tramp oils in larger skimming applications. The skimmers work in any application where skimming oil off of the top surface of a fluid is required.

Smartskim's suction skimmer changes position when fluid levels in your tank, bath or pit rise and fall. You can also easily set the exact depth of skim you need and fine tune it to accommodate aggressive surface skimming or to get underneath a foam layer to remove the floating oil.





#### **Benefits**

- Compatible with virtually any coolant or cleaner
- Automatically adjusts to varying surface levels during continuous operation
- Easily installed and maintained by personnel,
- A Wide range of fluid levels can be skimmed and easily installs over the tank edge

### **Features**

- The three float heads allow for ample surface coverage
- 304 stainless steel design maximizes equipment longevity
- Designed with an adjustable inlet weir for fine or deep skimming

Model	Inlet / Outlet	Hose Length	Float Size	Overall Dimensions (L x W x H)
Mini	1" / 3/4"	10'	6"	14.25" x 14" x 9"
Mega	2" / 1"	20'	9"	23" x 21.25" x 15.5"



# Swarf Monster

# Portable Filtration System

### **Applications**

Removal of ferrous, non-ferrous fines, and non-metallic particulates from industrial fluids

The Swarf Monster portable system is a highly reliable, minimal maintenance system that can be used for the removal of ferrous, non-ferrous and non-metallic particulates from industrial fluids.

A complete system comes with a 1" air-operated diaphragm, two industry standard size 2 lb bag filter housings, a fluid suction hose and discharge hose. For increased protection, a SmartSkim MagSleeve or MagPost magnetic filter can be included.





#### **Benefits**

- Each Swarf Monster can handle filtration levels from sub-micron to 400 micron
- Reduces the opportunity for bacteria growth and improves equipment reliability
- Maintenance is minimal on washer heads, coolant lines, and pump and servo valves with usage of the portable filtration system

#### **Features**

- MagSleeve or MagPost rare-earth magnetic separators can be inserted into one or both of the bag filter housings for ferrous applications
- System includes fluid suction hose with bulb strainer and discharge hose
- All equipment installed on an easy-to-move durable steel cart

Model Max. Fluid Processing Rate		Dimensions (L x W x H)	
Swarf Monster	50 GPM	25" x 25" x 48"	



# Ozone Generator System

Accessories

### **Applications**

Controlling bacteria and odor within your metal working systems

Control bacteria and odor within your metal working systems with the addition of an ozone generator system. By dispersing active oxygen into the bottom of your sump and tank, bacteria, fungus, yeast, and mold are killed on contact and reverts to its original form: oxygen.

It is safe for use with most all types of coolants. This versatility allows you to avoid process changes while reducing unnecessary costs and disposal due to rancid coolant.







### **Benefits**

- Provides consistent bacteria and odor control for coolant sumps, recycling systems, parts washers, and other process tanks
- Compact size and weight that seamlessly integrates with your existing technology
- Eliminate or minimize the use of biocide chemicals

#### **Features**

- Corona Discharge (CD) ozone generator
- Stainless steel dispersion stone
- Includes air flow control needle valve, air filter regulator with gauge, solid aluminum bracket with magnetic cups for ease of installation
- Electrical specifications:
   120 VAC 60Hz 0.2A, 220VAC 50Hz 0.1A

Model	Ozone Output	Dimensions (L x W x H)	Weight
Ozone Generator	0.3 g/h @ 6 SCFH	5.375" x 2" x 5.875"	2 lbs



# MagSleeve Magnetic Separators

### **Applications**

Filtering ferrous fines from industrial fluids

SmartSkim's High-Powered Rare-Earth Magnetic Sleeves can be installed inside your existing filter housings or tanks to filter ferrous fines caused by machining, honing, boring, grinding, broaching, roll forming, pipe & tube, heat treating, wash tanks, and other operations.

The magnetic rod can be easily removed from the stainless steel sleeve for easy cleaning of fines.







### **Benefits**

- Reduces the number of consumables in your facility
- Extend tooling and bag filter life
- Improve your coolant and parts washer quality
- Waste captured on magnets can be recycled or easily disposed of while reducing the frequency of filter housing maintenance

#### **Features**

- Handles heat up to 176°F (80°C)
- High powered rare earth magnet (10,000 gauss)
- Variety of sizes available

Model Diameter		Height
#1	3.5"	19"
#2	3.5"	27"
#4	3.5"	15"



# MagGrids & Rods

Magnetic Separators

# **Applications**

Filtering ferrous fines from industrial fluids

High-Powered Rare-Earth Magnetic Rods and Grids are available in many different arrangements and sizes.

Rods are typically 1" diameter, with 10,000 gauss rated neodymium iron boron magnets that are encased in 304 stainless steel. SmartSkim rods are normally in stock in lengths of 6", 8", 12", 16" & 24", and come with two threaded ends.









- Extends fluid and tool life in washers, paint lines, machine tools, and other industrial fluid applications
- Enhance fluid/parts quality while protecting your pumps





#### **Features**

- Several different arrangements and sizes
- High powered rare-earth magnet (10,000 gauss)
- Encased in 304 stainless steel cage for easy assembly and removal

Rod Height	6"	8"	12"	16"	24"
Rod Diameter	i i		1"—1.5"		



# MagPost Magnetic Separators

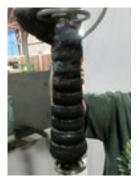
# **Applications**

Filtering ferrous fines from industrial fluids

High-Powered Rare-Earth Magnetic Posts can be installed inside your existing filter housings to filter ferrous fines caused by machining, honing, boring, grinding, broaching, roll forming, pipe & tube, heat treating and other operations.

Stainless steel sleeve allows magnetic post to remain centered inside housing and also serves as a scraping mechanism.











#### **Benefits**

- Extends fluid and tool life in washers, paint lines, machine tools, and other industrial fluid applications
- Reduce the number of consumables in your facility
- Waste captured on magnets can be recycled or easily disposed of, reducing filter housing maintenance
- Remove submicron sized particles which improves filtration methods

#### **Features**

- Lifting ring for ease of installation and cleaning
- High powered rare-earth magnet (10,000 gauss)
- Can be used as a pre-filter to fine filtration methods
- Standard model handles fluid temperatures up to 176°F (other models available for higher temps)

### Models

Model	Diameter	Height
#1	5.5"	19"
#2	5.5"	27"
#12	5.5"	27"



# Eclipse MicroMag

Magnetic Separators

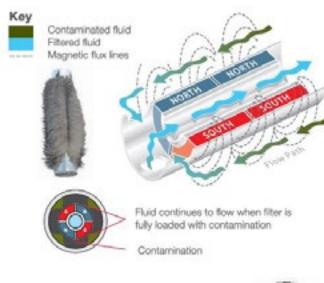
# **Applications**

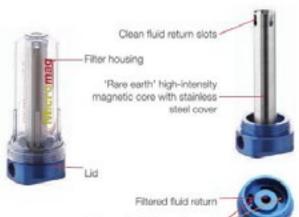
Compact magnetic filter for standard machine filtration, smaller wash stations

MicroMag is compact in size but has massive holding capacity. Units hold 2.2lbs, 4.4lbs, and 8.8lbs of contamination respectively, resulting in less downtime and increased productivity.

Contaminated fluid passes up the outside of the centrally mounted 'rare earth' magnetic core where contamination particles are attracted and retained.

The magnetic flux circuit geometry ensures a controlled build up of contamination so the filter can never block.





Tapered radial flow channels



#### **Benefits**

- High collection capacity relative to size
- Minimal pressure drop
- Easy clean

#### **Features**

- Patented design
- Non block design
- 3 sizes, versions available

#### Models

Construction	Flow rate (gallons)	Max. Operating Pressure	Temp. Range
	18		
SAN housing	26	174 psi	4—122° F
aluminum lid	40		
	18		
Aluminum	26	725 psi	32—284° F
Construction	40		
Stainless	18		
steel	26	1160 psi	32—284° F
construction	40		



# Eclipse FiltraMag

Magnetic Separators

# **Applications**

High performance magnetic filter suitable for oil, coolants, fuel, ink, paint & chemicals

FiltraMag's dual chambered design maximizes time fluid is exposed to high intensity magnets and ensures almost 100% contamination removal on the first pass through the filter. The patented magnetic circuit design ensures that the filter will never block.

High intensity magnetic cores ensure particle filtration down to sub-micron size.4,000 gauss magnetic core is available for standard machining. 11,000 gauss magnetic core pack is available for lower magnetically permeable materials (cast iron and carbide) or applications that require an ultraprecise surface finish.





#### **Benefits**

- Improved surface finish
- Cost savings on disposable filtration media
- Extended fluid lifespan
- Reductions in waste disposal
- Longer lasting tools and machinery

#### **Features**

- Unique dual flow technology<sup>™</sup>—maximizes collection capability
- Operates at up to 290psi bar
- Removes both magnetic and non-magnetic contamination
- Minimal pressure drop
- In-line connections
- Ideal for use in harsh chemical environments



# Eclipse Autofiltrex

Magnetic Separators

# **Applications**

Most ferrous machining applications (honing, lapping, grinding, forming, quenching)

Autofiltrex works in-line, taking dirty fluid from the holding tank and delivering clean polished fluid to the tool/workpiece contact point. High intensity magnetic circuits extract ferrous contamination particles as fluid flows through the cylinder,

When the magnets reach saturation point, a timed automated purging process lifts the magnetic cores from the housing and releasing contamination. This is simultaneously diverted via a 3-way valve to the reclaim unit. The unit can be set to purge at timed intervals or be manually executed.



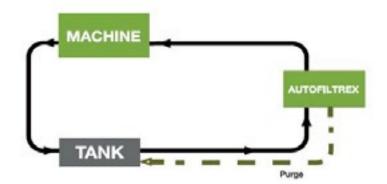


### Benefits

- Cleaner fluid delivery to the machine
- Reduced expenditure on filter media
- Reduced waste disposal
- Increased fluid lifespan
- Improved surface finish and accuracy

#### **Features**

- Fully automated cleaning
- 24/7 uninterrupted filtration
- Minimal space required





# Flow Pro Magnetic Indexing Drum Filter

Magnetic Separators

### **Applications**

Machining, grinding, honing, and micro sizing

The Flow Pro Magnetic Indexing Drum Filter is designed to provide you with the most efficient filtration at a minimum cost. This product is available in both, the standard ferrite ceramic drum or the rare earth Neodymium Iron Boron Magnetic drum.

The raised pole drum provides 40% more magnetic surface area per linear foot. Coolant loss is minimized because the drum is not continuously rotating which results in drier contaminants being discharged.



#### **Benefits**

- Designed for easy installation and minimal maintenance
- Cut your cost of dirty coolant disposal by up to 90%
- Operates for low cost in electric cost
- The system payback is typically less than 9 to 12 months
- Available for small, medium, and large operations

#### **Features**

- Requires minimal operator involvement and training
- Capable of maintaining machine tool coolants to 10 micron
- Nominal clarity without the use of consumable media







# Cecor Sump Shark

Sump Cleaners

# **Applications**

Cleaning dirty machine tool sumps for general machining





#### **Air-Powered Option**

The SA5 Sump Shark Sump Cleaner offers the deepest vacuum, pumping out pits up to 20 feet deep. This simple-to-operate and maintain equipment will help you clean dirty machine tool sumps quickly and safely with no moving parts. Reduce your machine tool downtime, cut labor costs, and save time with this proudly designed USA Manufactured sump cleaner.



### **Electric-Powered Option**

High-performing Sump Sharks make use of a safe, economical, and powerful three-phase electrical supply with no emissions. The three-phrase electric-powered cleaners offer power to clean dirty sumps quickly and safely. Reduce your machine tool downtime and labor costs with this proudly designed USA Manufactured sump cleaner.

#### **Benefits**

- Effectively filter chips and sludge from industrial fluids for re-use (when applicable)
- Pick up the thickest of sludge
- Air-powered option conveniently uses in-plant air supply
- Electric-powered option generates higher nozzle velocity to pick up both puddles and dry solids

### Models

Tank Size (gallons)	60	90	140	200	300+
Air	Χ	Х	Χ	Χ	Х
115 - 1 ph	Х	Х	Х	Χ	Х
230/460 3 ph				Х	Х
Propane				X	Х

#### **Features**

- Pump in / pump out capability
- The smallest sump cleaner (60 gal) offers a vertical design for smaller spaces
- Electrical-powered option runs on 208-230-460/60/3 electrical



# Optional Equipment

Accessories

# Mobile Dispensing Cart

# **Applications**

Quick removal and easy transport of coolants



#### Benefits & Features

- Easy to move 125 gallon capacity tank with air-operated pump
- Dimensions 41"W x 60"L x 49"H
- Ideal for daily coolant sump top-offs
- Pumping rate of up to 50 GPM
- Gravity flow of fluid when plant air is not available



# Hose Reel Assembly

# **Applications**

Distribution of recycled coolant back to your sumps





# Benefits & Features

Dual pedestal, low pressure, spring driven, retractable, hose reel assembly with high quality hose, inlet connection hose kit, and gas type nozzle dispenser.

Size	3/4" x 75' Hose Reel		
I.D.	3/4"		
O.D.	1-1/16"		
PSI	300		
Wt (lbs)	93		







Our Philosophy:

To deliver patented and proprietary systems that last a lifetime, use few consumables, and require minimal maintenance.

Our Goal:

To help our customers reduce operating costs, improve environmental performance, and operate more efficiently.

# The benefits that our customers report by using by using SmartSkim systems:

- Reduce new fluid purchase costs by up to 75% by extending the life of those fluids
- Reduce waste treatment costs by 50% 90%
- Environmental issues such as waste disposal, risk avoidance, meeting ISO 14000 requirements
- Improved tool life & product quality
- Safeguard employee health and safety due to reduced dermatitis, misting, smoke, bacteria and odors
- Obtain system paybacks typically in less than 9-12 months

- Systems available for small, medium, and large operations
- SmartSkim systems are designed for easy installation and minimal maintenance
- The most reliable systems on the market with little to no downtime
- Minimal operator involvement and training
- Most systems run on plant air only, no electrical panel necessary on standard systems

# Powering a Better World Together

Trust the experts to protect your investments. With a wide variety of products and services, Sentry Equipment strives to ensure your team has the right approach and expertise to fit your unique application. Explore our product capabilities to find your perfect match or contact our experts to discuss your solution.

