

The Most Versatile, Effective, and Economical Patented Oil Skimming System Available

Skim Anywhere



Variaxe™

The Variable *Axis* provides,
Variable Skimming *Access*

Patent #US 9,248,388 B1 / Patent #US 9,849,410 B1
Patent #US 10,543,438 B1

Video Link!



Semi-Modular
Never Overflows
Superior Media

Fully Portable
Easy Lift Off
Easy Transport

Easy View Contents
Use on Top of Sump
Use Beside Sump

Horizontal Reach
Vertical Reach
No Chip Buildup



Pivot Extension Version Shown

Not just an alternative, but a better and more cost effective way, to skim oil.

Real Coolant Solutions

Real Coolant Solutions



Phone: 763-856-5020
Cell: 612-747-0877

31307 144th Street , Princeton, MN 55371
Website: www.variaxeskimmer.com Email: realcoolantsolutions@gmail.com

REAL SOLUTIONS FOR MACHINE TOOL COOLANT MANAGEMENT

Variaxe Skimming Systems, US Patents and Trademark

United States of America
United States Patent and Trademark Office

Variaxe

Reg. No. 6,210,736
Registered Dec. 01, 2020
Int. Cl.: 7
Trademark
Principal Register

Real Coolant Solutions, Inc. (MINNESOTA CORPORATION), Formerly ISM&M, Inc.
31307 144th Street Nw
Princeton, MINNESOTA 55371
CLASS 7: Oil separators
FIRST USE 4-16-2013; IN COMMERCE 4-16-2013
THE MARK CONSISTS OF STANDARD CHARACTERS WITHOUT CLAIM TO ANY PARTICULAR FONT STYLE, SIZE OR COLOR
SER. NO. 88-914,164, FILED 05-13-2020



Andrew Rosen
Director of the United States
Patent and Trademark Office

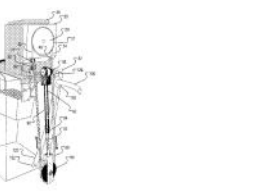


(12) **United States Patent** (10) Patent No.: **US 9,248,388 B1**
Jensen (45) Date of Patent: **Feb. 2, 2016**

(54) **SKIMMING APPARATUS** 4,089,784 A * 5/1978 Ensh et al. 210:526
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7,431,166 B2 10/2008 Davilan
7,611,001 B2 12/2010 Davilan
2011/0169930 A1 * 12/2011 Doonan 210:742

(21) Appl. No.: 14/004,155
(22) Filed: **Sep. 23, 2013**
(51) **Int. Cl.**
BOID 17:002 (2006.01)
BOID 15:04 (2006.01)
F10H 7:02 (2006.01)
BOID 17:02 (2006.01)
EX08 15:10 (2006.01)
(52) **U.S. Cl.**
CPC *BOID 17:002* (2013.01); *BOID 17:0214* (2013.01); *EX08 15:10* (2013.01); *F10H 7:02* (2013.01)
(58) **Field of Classification Search**
CPC 10013 17:002; 10013 17:0214; E02B 15/104
USPC 210/242.3, 242.4, 526, 540, 923, 924, 210/776
See application file for complete search history.

(56) **References Cited**
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3,695,451 A 10/1972 Schmidt et al.



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* cited by examiner

Primary Examiner—Christopher Upton
(74) **Attorney, Agent, or Firm**—Fish & Richardson PC.
(57) **ABSTRACT**
A skimming apparatus with a pivot arm and a drive follower on the pivot arm that guides a bellows to facilitate precise placement of the bellows for efficient skimming.
19 Claims, 9 Drawing Sheets

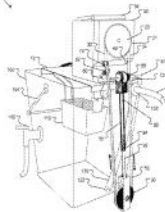


(12) **United States Patent** (10) Patent No.: **US 9,849,410 B1**
Jensen (45) Date of Patent: ***Dec. 26, 2017**

(54) **SKIMMING APPARATUS** USPC 210/242.3, 242.4, 526, 540, 776, 923, 210/924, 15/104.04
(71) Applicant: **ISM&M, Inc.**, Princeton, MN (US) See application file for complete search history.
(72) Inventor: **Jonathan Allen Jensen**, Princeton, MN (US) (56) **References Cited**

(73) Assignee: **ISM&M, Inc.**, Princeton, MN (US)
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 29 days.
This patent is subject to a terminal disclaimer.
(21) Appl. No.: **15/010,274**
(22) Filed: **Jan. 29, 2016**
Related U.S. Application Data
(63) Continuation of application No. 14/054,155, filed on Sep. 23, 2013, now Pat. No. 9,248,388.
OTHER PUBLICATIONS
(51) **Int. Cl.**
BOID 17:002 (2006.01)
CO2F 1:00 (2006.01)
BOID 15:04 (2006.01)
BOID 21:00 (2006.01)
BOID 21:24 (2006.01)
BOID 35:46 (2006.01)
BOID 17:02 (2006.01)
(52) **U.S. Cl.**
CPC *BOID 15:04* (2013.01); *BOID 17:0214* (2013.01); *BOID 21:002* (2013.01); *BOID 21:243* (2013.01); *CO2F 1:00* (2013.01)
(58) **Field of Classification Search**
CPC 10013 17:002; 10013 17:0214; E02B 15/104; B08B 3/023; E02B 15/104; B08B 3/023

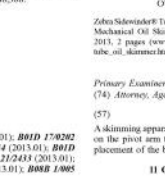
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7,611,001 B2 12/2010 Davilan
2011/0169930 A1 * 12/2011 Doonan
(Continued)
Primary Examiner—Christopher Upton
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12 Claims, 9 Drawing Sheets



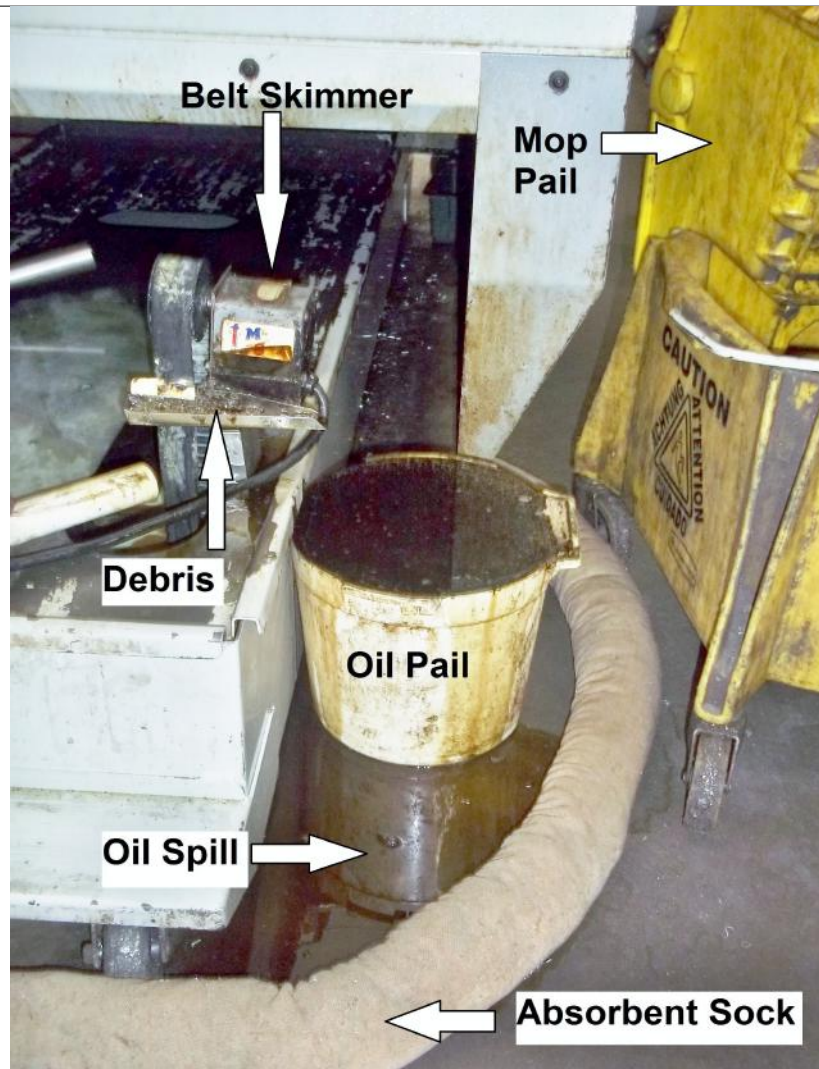
(12) **United States Patent** (10) Patent No.: **US 10,543,438 B1**
Jensen (45) Date of Patent: ***Jan. 28, 2020**

(54) **SKIMMING APPARATUS** (2013.01); *BOIB 9:023* (2013.01); *CO2F 1:00* (2013.01); *EX08 15:104* (2013.01); *BOIB 3/023*
(71) Applicant: **ISM&M, Inc.**, Princeton, MN (US)
(72) Inventor: **Jonathan Allen Jensen**, Princeton, MN (US)
(73) Assignee: **ISM&M, Inc.**, Princeton, MN (US)
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 9 days.
This patent is subject to a terminal disclaimer.
(21) Appl. No.: **15/083,274**
(22) Filed: **Dec. 22, 2017**
Related U.S. Application Data
(63) Continuation of application No. 15/010,274, filed on Jan. 29, 2016, now Pat. No. 9,849,410, which is a continuation of application No. 14/004,155, filed on Sep. 23, 2013, now Pat. No. 9,248,388.
OTHER PUBLICATIONS
(51) **Int. Cl.**
CO2F 1:00 (2006.01)
BOID 15:04 (2006.01)
BOID 17:02 (2006.01)
EX08 15:10 (2006.01)
BOIB 1:00 (2006.01)
BOIB 9:023 (2006.01)
BOIB 21:00 (2006.01)
BOID 21:24 (2006.01)
BOID 35:46 (2006.01)
(52) **U.S. Cl.**
CPC *BOID 15:04* (2013.01); *BOID 17:0202* (2013.01); *BOID 17:0214* (2013.01); *BOID 21:002* (2013.01); *BOID 21:243* (2013.01); *BOID 35:466* (2013.01); *BOIB 1:005*

U.S. PATENT DOCUMENTS
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782,665 A 2/1905 Skalar
1,624,802 A 4/1927 Coleman
1,748,541 A 2/1930 Davin
2,045,511 A 6/1936 Babcock
3,508,663 A 4/1970 Bell
3,617,552 A 11/1971 Will et al.
3,643,804 A 2/1972 Sharpton
3,695,451 A 10/1972 Schmidt et al.
4,089,784 A 5/1978 Ensh et al.
(Continued)
Primary Examiner—Christopher Upton
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(57) **ABSTRACT**
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11 Claims, 9 Drawing Sheets



-- The Problem? -- The Pail Runneth Over..



Some of the Costs Related to the Overflow Problem

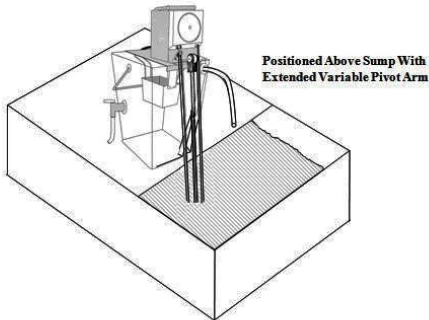
- Labor to Mop & Handle Absorbents
- Disposal Cost of Absorbents
- Disposal Cost of Waste Water & Coolant From Oil Pail & Mop Pail
- Time Ordering and Payables for Absorbent Socks, Pads & Rags
- Fines Build Up on Skimmer Ramp & Take Time to Remove
- Other Duties Not Performed While Dealing With This Problem

The Solution? The Variaxe Skimming System

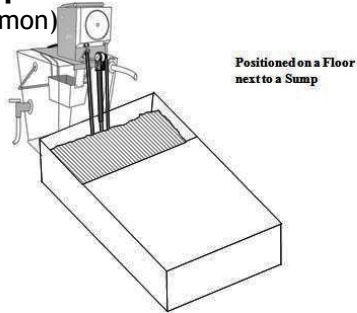
Variaxe Common Applications

(all shown with Pivot Extension Option)

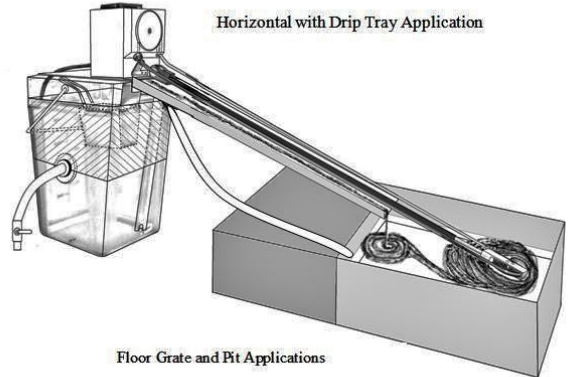
1. Sump Top Version



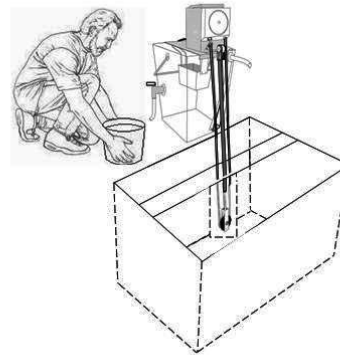
2. Sump Side Version (most common)



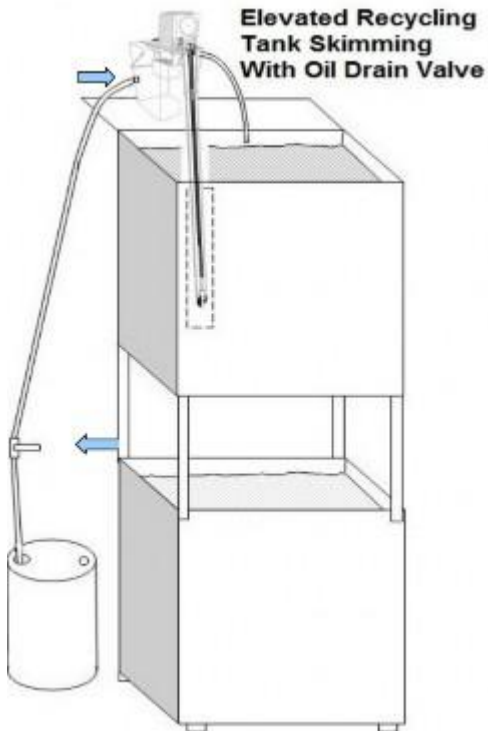
3. Pivot Extension Version



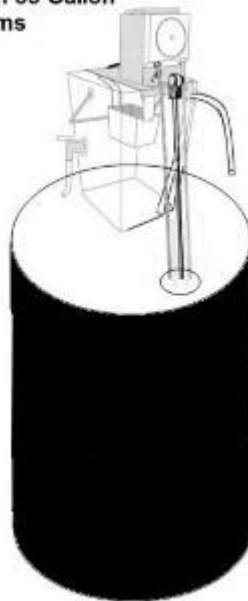
Floor Grate and Pit Applications



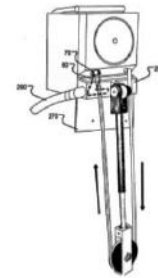
Just some more examples of Variaxe applications



Skim 55 Gallon Drums



4. Clamp On Version

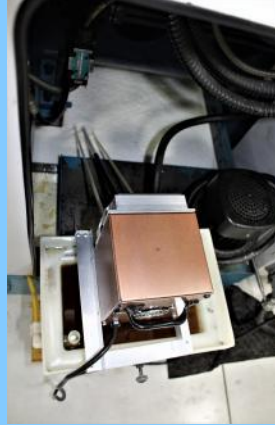


Variaxe Skimmer Application Gallery

Sump Top Applications



1. Pivot Extension 2. Sump Top



1. Sump Top

2. Half Pail With Pivot Ext.



Sump Side on Floor, Most Common App.



Pivot Extension Option Example



1. Top of Parts Washer 2. Top of 275 Gallon Tote



Multi-Applications



Skim Oil, Chips, & Fines

Describes all, Sump Side, Sump Top, and Pivot Extention Pail Combos

The **VariAxe Pail Top Combos** can fit on top or beside a sump, beside a chip conveyor, on recycling tanks or 55-gallon drums, even in enclosed machines through small access holes. **The Applications Are Almost Unlimited!**



Illustration 1; Sump Side Version Shown.

- Dimensions: 12" D x 9" W x 21" H
- Tube Speed: 2.25" per second
- Reach: Standard 12" & 22" / many custom reaches available upon request.
- Oil Removal: Up to 2 quarts per hour
- Required Opening: 1" x 3"
- Electrical: 115v, 60 Hz, 46 watt, 1.1 Amp, fan cooled continuous duty motor with overload protection
- Maximum Temperature: 110° F
- Shipping Weight: 13 lbs



COOLANT SOLUTIONS, INC.
Phone: 763-856-5020 / Cell: 612-747-0877

Benefits

VariAxe saves money by extending the life of the coolant and helps control bacteria and fungus by removing their food sources. A cleaner coolant environment will also improve tool life, skin conditions for operators, eliminate foul odors and reduce clean outs. **VariAxe** picks up oil, chips and fines and drops them into the **VariClean Pail** to gravity separate tramp oils, chips and fines from coolant, and returns coolant to the sump without oil overflowing onto the shop floor. This allows for savings on the costly use and disposal of absorbent products. It will also help reduce downtime and the need to frequently clean sumps.

Features

- **Lift off Skimmer, Carry off Pail;**
With the semi clear pail, it is easy to see full separation of the fluids. When it is full of oil, lift off skimmer, pour oil into 5 gallon waste pail.
- **Dual action scrapers pick up chips and fines with the oil;**
The contaminates from metals and plastics are picked up with the round belting of **VariAxe**. These contaminates adhere to the oil, that has an ionic attraction to the belting, and draws these contaminates into the **VariClean Pail**.
- **Portable unit with belting that fits almost anywhere;**
With an opening of 1"x 3", the **VariAxe** belting can get into the most difficult spaces. The entire unit can be easily picked up and moved to another machine. Tube lengths can be custom fit for many different applications.
- **Pulls less coolant than other skimmers;**
The smaller surface of the belting is very effective for removing oil, chips and fines while pulling very little coolant compared to wheel or belt skimmers.
- **Due to the portability, OSHA allow extension cords;**
The Variaxe can be moved to address sumps with dual compartments, or be transported to other machines where extension cords are needed.
- **Single large diameter drive wheel;**
The wheel has a very large contact area, which maximizes drive and eliminates belt slippage, denting or deformation.
- **Fan cooled heavy-duty gear motor;**
The custom motor with steel gears has an overload protected motor that provides long lasting performance and reliability.
- **On / Off power switch with 10' NEMA cord;**
Allows easy on / off with an extended 10' cord reach.
- **Separate Skimmer and Pail handles for easy transport**
- **One-year warranty on Skimmer and components**

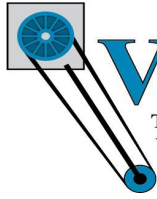
Real Coolant Solutions

Real Coolant Solutions

REAL SOLUTIONS FOR MACHINE TOOL COOLANT MANAGEMENT

1st US Patent # US 9,248,388 B1 * 2nd US Patent # US 9,849,410 B1 * 3rd US Patent 10,543,438 B1

High Pressure & Parts Washer Applications!



Variaxe™ New for July 2021

The Variable Axis provides,
Variable Skimming Access
Patent #US 9,248,388 B1 / Patent #US 9,849,410 B1
Patent #US 10,543,438 B1

The **VariAxe System** can fit on top or beside a sump. The **Mag-Shelf** can be "hung on". Variaxe can also be mounted to sheet metal on side of machine with the **L-Shelf** so it rests above sump pumps and hoses. Variaxe be used with High Pressure tanks, Recycling Tanks, Parts Washers or 55-gallon drums. **The Applications Are Almost Unlimited!**



Variaxe App;
Parts Washer
for temps up
to 140 degrees



Variaxe App;
Mag-Shelf with
Shorter Pail
and Pivot Ext.
on ChipBlaster

Product Specifications, Skimmer and Pail

- Dimensions: 12" D x 9" W x 21" H or 14" H
- Tube Speed: 2.25" per second
- Reach: Standard 24" / custom length can be requested
- Oil Removal: Up to 2 quarts per hour
- Required Opening: 1" x 3"
- Electrical: 115v, 60 Hz, 46 watt, 1.1 Amp, fan cooled continuous duty motor with overload protection
- Maximum Temperature: 110° F
- Shipping Weight: 13 lbs

Benefits

VariAxe saves money by extending the life of the coolant and helps control bacteria and fungus by removing their food sources. A cleaner coolant environment can also improve tool life, skin conditions for operators, eliminate foul odors and reduce clean outs. **VariAxe** picks up oil, chips and fines and drops them into the **VariClean Pail** to gravity separate tramp oils, chips and fines from coolant, and returns coolant to the sump without oil overflowing onto the shop floor. This allows for savings on the costly use and disposal of absorbent products. It will also help reduce downtime and the need to frequently clean sumps.

Features

- **Lift off skimmer, easily empty pail;**
With the semi clear pail, it is easy to see full separation of the fluids. When it is full of oil, lift off skimmer, lift off the pail and pour into another 5 gal pail to transport to disposal.
- **Dual action scrapers pick up chips and fines with the oil;**
These chips and fines are picked up with the belting of **VariAxe**. There is an ionic attraction to the belting, and it draws these contaminants into the **VariClean Pail**. Chips and fines will not hang up on ramps like other skimmers
- **Portable unit with belting that fits almost anywhere;**
With an opening of 1"x 3", the **VariAxe** belting can get into the most difficult spaces. The entire unit can be easily picked up and moved to another machine. Tube lengths can be custom fit if needed for some applications.
- **Pulls less coolant than other skimmers;**
The oil high capacity oil attracting belting is very effective for removing oil, chips and fines while pulling very little coolant compared to wheel or belt skimmers.
- **Due to the portability, OSHA allow extension cords;**
The Variaxe can moved to address sumps with dual compartments, or be transported to other machines where extension cords are needed.
- **Single large diameter drive wheel;**
The wheel has a very large contact area, which maximizes drive and eliminates belt slippage, denting or deformation.
- **Fan cooled heavy-duty gear motor;**
The custom motor with steel gears has an overload protected motor that provides long lasting performance and reliability.
- **On / Off power switch with 10' NEMA cord;**
Allows easy on / off with an extended 10' cord reach.
- **Separate Skimmer and Pail handles for easy transport**
- **One-year warranty on Skimmer and components**

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Variaxe™

The Variable Axis provides,
Variable Skimming Access
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Patent #US 10,543,438 B1

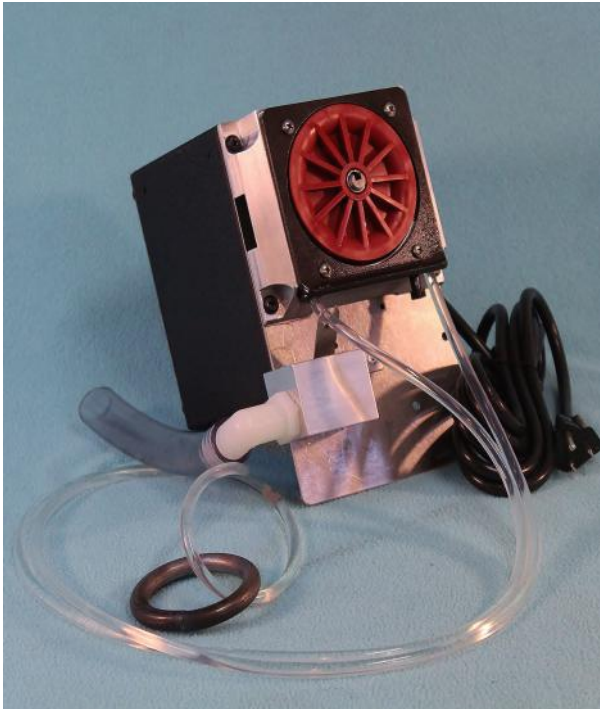
When Space is Limited

Clamp on Version

Can be used on Recycling Tanks, Totes, Parts Washers, Standad Sumps and more.

The Most Versatile and Effective Oil Skimmer Available!

Can use 3/4" tubing, or PVC pipe to ramp oil out of low overhead and hard to reach areas.



Product Specifications

- Dimensions: 5.5" D x 5" W x 6" H (tab 2.5" D)
- Tube Speed: 2.25" per second
- Reach: 8", 12", 18", 24" standard (custom lengths available)
- Oil Removal: Up to 2 quarts per hour
- Minimum Required Opening: 1" x 3"
- Electrical: 115v, 60 Hz, 46 watt, 1.1 Amp, fan cooled continuous duty motor with overload protection
- Maximum Temperature: 110° F
- Shipping Weight: 7 lbs

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Cell: 612-747-0877



COOLANT SOLUTIONS, INC.

Benefits

VariAxe extends the life of the coolant, improving tool life, and reducing wastes. **VariAxe** helps control bacteria by removing their food source, improving coolant performance while protecting operators skin and eliminating foul odors.

Features

• **Can fit almost anywhere;**
With an opening of only 1"x 3" and custom reach belting, **VariAxe** is the most versatile, and effective skimmer on the market. We can skim up to 10 foot deep.

• **High efficiency compared to conventional skimmers;**
With dual action scrapers and the high strength elastomeric round belting is very effective for attracting oil while skimming very little coolant proportionate to a disc or belt skimmer. This is important when considering cost of absorbents and their disposal if waste overflows the pail.

• **Maximum drive motor, no slip drive wheel;**
The large radius drive wheel's, profiled surface assures a constant drive. For performance longevity, the motor's "pull load" rating, is more than actual pull required.

• **Steel housing, SS mount tab polypropylene parts**
All materials have excellent chemical resistance will last for many years.

• **On/off switch & 10' Nema power cord;**
The power switch allows the skimmer to be easily turned off when not needed. The Nema power cord is 10' long.

• **Fan cooled custom heavy-duty gear motor;**
The steel gears in the overload protected motor provide long lasting performance and reliability. Timers are recommended so component life is extended.

• **Belt lengths and materials for custom jobs;**
Our high strength elastomeric belting provides long service life. We make custom reach when needed. Our belting can be used in Parts Washers where temperatures get up to 140 degrees..

• **Clamp for easy mounting, and drilled for screw mounts**

• **Innovative dual scraper design**

• **Tote handle for easy transport**

• **Quick belt change face plate**

• **One-year limited warranty**

Components subject to change for purpose of optimization or availability

Real Coolant Solutions

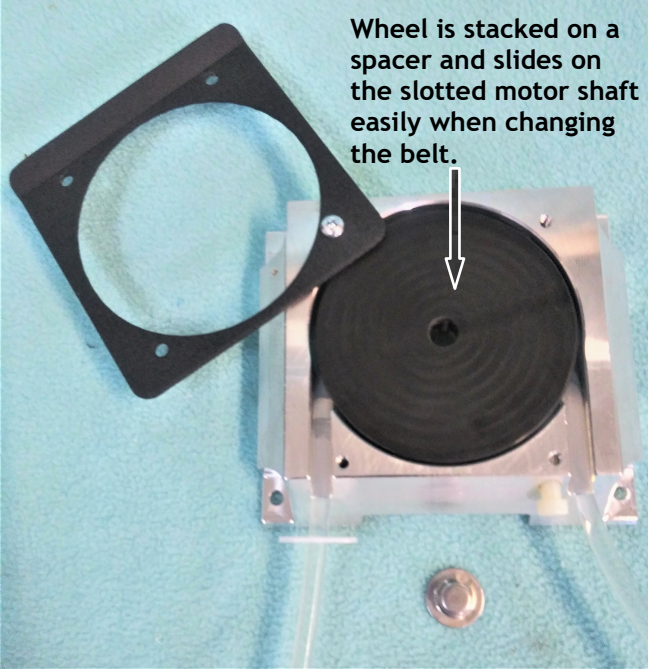
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Illustrating some of the Variaxe System Patented Features

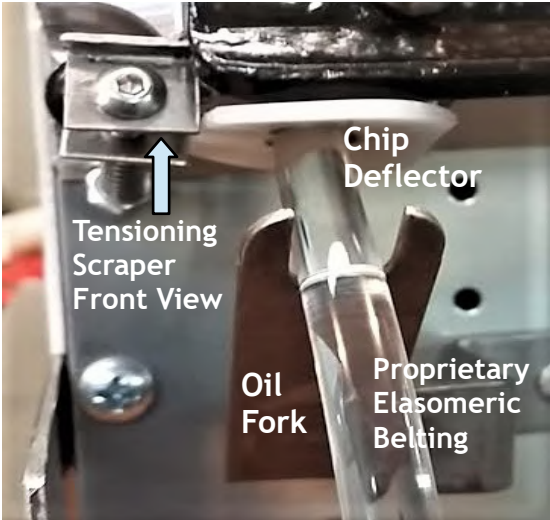
1. Single Large Drive Wheel (Max pulling power and easy change belt system)





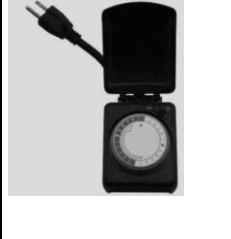





2. Pivot Extension Assembly (spring loaded extension that can be used on all versions or added to future applications)



Patented oil directing fork, chip deflector, proprietary elastomeric belt and tensioning scraper
(The scraper auto-tensions during the life of the skimming belt to maximize performance)



Variaxe Accessories Page

	<p>Mag Shelf</p> <p>This shelf is made to hang on the side of a sump with a upper steel lip. Chip Blaster sump or a recycling tank would be examples of where to use this product. This shelf is also retractable to fold up out of the way.</p>	<p>VXS-Mag-Shelf</p> <p>NEW</p>
	<p>L Shelf</p> <p>This shelf is designed to be screw applied to sheet metal on the side of the machine to sit above pumps and hoses. Depending on thickness, 8-32 or #8 sheet metal screws can be used. This shelf is retractable too.</p>	<p>VXS-L-Shelf</p> <p>NEW</p>
	<p>Timer Option</p> <p>Most sumps require only 1-4 hours a day of skimming. Using a timer greatly increases skimmer component life and is worth the investment. Recommended to run evening during shut down time of day if possible.</p>	<p>VXS-Timer</p>
	<p>Variaxe Bag Filter</p> <p>These filters are used in cast iron, aluminum or applications where the accumulating fines can plug up the return pipe in the VariClean pail. Fines can be then easily removed from the pail.</p>	<p>VXS-Filters</p>
	<p>Sump Basket</p> <p>When floating chips are heavy and hard on the belting, this basket can be placed in the sump and the steel belt ring can be dropped into the basket. This keeps excess chips away, and helps the skimmer pick up oil and fines to increase the belt life.</p>	<p>VXS-SumpBasket</p>
	<p>Drain Spigot Pail Option</p> <p>If desired a spigot can be added. In that case there is no need to lift skimmer off pail to empty tramp oil. Just make sure to return the spigot to the off position.</p>	<p>VXS-Spigot</p>
<div style="display: flex; justify-content: space-around; align-items: center;"> <div data-bbox="467 1785 803 1948">  <p>REAL COOLANT SOLUTIONS, INC.</p> </div> <div data-bbox="803 1785 1105 1948">  <p>VariaxeTM The Variable Axis provides, Variable Skimming Access <small>Patent #US 9,248,388 B1 / Patent #US 9,849,410 B1 Patent #US 10,543,438 B1</small></p> </div> </div>		

New Patented Variaxe Skimming System

Comparison to Conventional, Metal Working Fluid, Oil Skimmers

Types of Skimmers	Variaxe Round Belt Skimmer	Flat Belt Skimmer	Disc Skimmer
<i>Media Surface Comparison</i>	<u>.785" Belt Circumference</u>	<u>1" Belt Width</u>	<u>12" Disc Diameter</u>
			
Can Reach Into Multiple Smaller Oil Access Points	Yes	Limited	Very Limited
Fully Portable System (OSHA Allows Extension Cords)	Yes	Limited	Limited
Stops Overflow on Floor	Yes	No	No
Gravity Decant Separation Pail	Yes	No	No
Economical Extended Reach Options	Yes	Limited	Very Limited
Fluids, Chips & Fines Fall Away Into Pail	Yes	Fluids Only Debris Builds Up	Fluids Only Debris Builds Up
Clear Pail Shows When Oil is Ready for Disposal	Yes	No	No
Use on Sumps, Tanks, Drums, Floor Grates & More Apps.	Yes	Limited	Very Limited
Pivotal Extension Option for Precision Vertical / Horizontal Placement	Yes	No	No
Staged Scrapers for better Fluid, Chip & Fine Removal	Yes	No	No
Residual Quart Per Hour SAE 30 @ 65 F. Coolant / Oil Ratio Same Oil / Less Coolant	Approx. qt. per hr. 2 qt. Oil x ¼ Coolant	Approx. qt. per hr. 2 qt. Oil x ½ Coolant	Approx. qt. per hr. 2 qt. Oil x 2 Coolant

1st U.S. Patent # US 9,248,388 B1 * 2nd U.S. Patent # US 9,849,410 B1












ISM&M, Inc. * 31307 144th Street * Princeton, MN 55371 * Phone; 763-856-5020 * Fax; 763-856-8411

Website; www.ism-m.com * Displacement Video Link; <https://www.youtube.com/watch?v=CFmc9fmzZ3M>









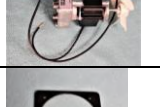





Variaxe Skimmer System *vs* Tube Skimmer System

Types of Skimmers	Variaxe Round Belt Skimmer	Tube Type Skimmer
<u>Media Surface Comparison</u>	<u>.785" Belt Circumference</u>	<u>.588" Tube Circumference</u>
<p>1st U.S. Patent # US 9,248,388 B1 2nd US Patent # US 9,849,410 B1</p> <p>ISM&M, Inc. * 31307 144th Street * Princeton, MN 55371 * Phone; 763-856-5020 * Fax; 763-856-8411</p> <p>Website; www.ism-m.com</p> <p>Email: the.coolant.guy@gmail.com</p>		
Belting Size vs Tube Size	<p>1/4"</p> <p>Average 2 quarts per hour SAE 30 @ 65 F coolant / oil</p>	<p>3/16"</p> <p>Average 1.5 quarts per hour SAE 30 @ 65 F coolant / oil</p>
Drive Wheel Diameter	<p>3 1/4"</p> <p>More surface for positive pull and longevity</p>	<p>1 3/4"</p> <p>Wears more quickly losing efficiency</p>
Oil / Coolant Separation System	<p>Gravity Decant Separator Pail</p> <p>Multiple benefits as detailed on info flier \$50.00</p>	<p>Uses A "Diverter" Instead</p> <p>Little benefit, still overflows on floor \$99.00</p>
Scraper System	<p>1 static, 1 tensional, 1 directional direct drop</p> <p>More efficiently scrapes fluids, chips and fines that drop directly in the pail out without buildup</p>	<p>1 scraper with drain ramp</p> <p>Less efficient scraping of fluids chips and fines that build up on ramp</p>
Belt / Tube Change System	<p>Slotted Face Plate System</p> <p>Only purchase belt of desired length, easy user install to replace belt at \$49.00</p>	<p>Cartridge System</p> <p>Components wear faster so cartridge is offered at \$131.00 for user install</p>
Capabilities of Reach	<p>Variable Pivotal Extension Option</p> <p>Made to reach lengths up to 10' long. Swivels horizontally and vertically in variable axes</p>	<p>Hangs Down Vertically Only</p> <p>Can be offered in extended length to for a vertical undirected reach only</p>
Round Belt / Tube Properties	<p>Round Belting Superior oil attracting media</p> <p>Weld surface and strength of elastomer is also superior to tubing in, performance, service and wear longevity</p>	<p>Tubing Basic oil attraction media</p> <p>Less surface of the weld can lead to failure. Thin walled tubing wears faster</p>
Factory Service	<p>Available if needed</p>	<p>No longer available</p>
Standard Warranty	<p>1 year on Oil Skimmer</p>	<p>1 year on Oil Skimmer</p>

Variaxe Systems Pricing 07-15-21

	Variaxe Pail Bracket Sump Side Skimmer / Pail Combo (Sits on the floor beside the sump and the belt drops into the sump. Most common application)	VXS-PB-SS-C	
	Variaxe Pail Bracket Sump Top Skimmer / Pail Combo (9" longer reach belt. Skimmer sits on top of the sump and the belt drops into the sump thru an opening)	VXS-PB-ST-C	
	Variaxe Pail Bracket Pivot Extension Skimmer / Pail Combo (With Variable Axis Pivot Extension Option Added / 24" reach standard. A variable axis allows variable access)	VXS-PB-EXT-C	
	Variaxe Pail Bracket High Pressure Skimmer / Pail Combo (Comes with an 8.5" Shorter Pail and BELT-2 . Used with ChipBlaster and MP Systems Sumps) (L-Shelf, Mag-Shelf and Pivot Ext. shown, are options)	VXS-PB-HP-C	NEW
	Variaxe Pail Bracket Pivot Extension Skimmer Only (no pail) (Standard 24" Reach)	VXS-PB-EXT	
	Variaxe Pail Bracket Sump Side Skimmer Only (no pail) (Most common application)	VXS-PB-SS	
	Variaxe Pail Bracket Sump Top Skimmer Only (no pail) (9" longer reach belt to set on top of sump and drop into the sump)	VXS-PB-ST	
	Variaxe Clamp on Skimmer (no pail) (Sump Side Clamping to use with a 3/4" hose or PVC pipe and conventional collection pail on floor)	VXS-CO	
	VariClean Standard Pail (15.5" tall pail recommended for all Pail Bracket Skimmers including Sump Side or Sump Top applications)	VXS-5	
	VariClean Shorter Pail (8.5" tall pail with Belt-2 allows access to most High Pressure elevated sumps, such as MP System or Chip Blaster) (The Mag Shelf can be used if needed)	VXS-2.5	NEW
	Mag Shelf (Made to hang on the side of a sump with a upper steel lip, such as Chip Blaster)	VXS-MagShelf	NEW
	L Shelf (Screw apply to the sheet metal on the side of the machine to sit above pumps and hoses. Depending on thickness, 8-32 or #8 sheet metal screws can be used)	VXS-L-Shelf	NEW

Variaxe Parts & Accessories Pricing 07-15-21

	Belting for "Sump Side"Application (Most Common / Used when the pail sits on the FLOOR and the belt drops into the Sump)	VXS-BELT-1	
	Belting for "Sump Top"Application (9"longer / used when the pail sits on the TOP of the Sump and the belt drops down into it)	VXS-BELT-2	
	Belting for the "Pivot Ext. Skimmer" (No Ring. For use with Pivot Extension skimmer, standard length has 24"reach)	VXS-BELT-PE	
	Belting for "High Pressure"Application (Used with short pail to drop into high pressure sumps such as ChipBlaster and MP Systems)	VXS-BELT-HP NEW	
	Belting for 3' Reach Applications (Used on Totes, Recycling Tanks, and some High Pressure, Parts Washer and other applications where extended reach is required)	VXS-BELT-T3	
	Pivot Extension Option (This can be added to all versions later due to modularity / 24"reach standard, belt included)	VXS-EXT	
	Variaxe Drive Wheel	VXS-DriveWheel	
	Variaxe Custom AC Gear Motor	VXS-GearMotor	
	Variaxe Retainer Cover (The belt retainer covers)	VXS-RetainerCover	
	Variaxe Face Mount Aluminum (Replacement Face Mount Aluminum Part.)	VXS-FMAL	
	Timer Option (Most sumps require only 1-4 hours a day of skimming. This option greatly increases skimmer component life)	VXS-Timer	
	Variaxe Bag Filter 25 units (These filters are used in cast iron, aluminum or applications where the fines can plug up the return pipe.)	VXS-Filters	
	Sump Basket (When floating chips are heavy, this can be placed in the sump and the steel belt ring can be dropped into the basket. This keeps excess chips away)	VXS-SumpBasket	
	Drain Spigot Pail Option (No need to lift skimmer off pail to empty tramp oil)	VXS-Spigot	



Video Belt Change Instructions



Set Up Instructions, Warnings and Warranty

- **Open the box** and remove Skimmer, components and packing from the pail.
- **If pivot ext. version** assemble extension and snug 1/4"-20 socket head screws.
- **Add coolant to the pail** so it is about 1/2 full. This will help counter weight the pail.
- **Put the lid** onto the pail, so the lid **opening** is on the same side as the 1/2" clear feedback tube.
- **Set the skimmer** on top of the pail so the front of skimmer faces same side as the 1/2" feedback tube and lid opening.
- **Snug up the thumb screw** on back of skimmer onto the back of the pail and lid while holding down on the angle support. The small front "knobs" on the skimmer angle support should seat against the front of the pail.
- **For a Sump Side App.** Set the pail up to the sump and drop the belting into the sump. Make sure the 1/2" feedback tube is returning into the sump.
- **For a Sump Top App.**, Set the pail on top of the sump and drop the belting into an opening into the sump. Make sure the 1/2" tube is hanging back in the sump for coolant return. This assures when the oil gets to the feedback point, it will not overflow on the floor but return to the sump.
- **Plug in skimmer** into timer if used. Plug in the timer to an outlet. Refer to instructions on setting the timer. We recommend that the skimmer be set to run four to eight hours per day. It usually only takes a hour or two in most conditions, depending on the machine to pick up the oil. This will increase motor life if used in timed intervals, versus running continuously.
- **Turn on switch** on the back of the skimmer, **making sure the clear belting is resting in the scraper "oil director fork" and hanging into the sump.** You should be skimming tramp oil.

(Ask your distributor specialist for more set up instructions or call us directly)

Warnings

- Do not lift the skimmer by the handle while still attached to the pail.
- For skimming oil from water based liquid surfaces only
- Do not immerse skimmer into any liquid
- Shield motor from spray or liquid exposure
- Do not use in an explosive or flammable environment
- Per NEC regulations, a ground fault interrupt must be installed or used as the power source

Warranty

- All parts and labor are warranted for a period of one year
- User tampering or exposure of liquid to motor will void all warranties

Replacement Parts and Service

- Under normal conditions using a timer, Variaxe can last for five years or more before service
- The most common replacement is the Belting, Drive Wheel or Scraper due to abrasion to these components. Motor life varies due to environment and duties. Timers recommended Cleaning dust and using a WD 40 lubricating spray at motor armature bi-annually extends life of the motor.
- RCS, Inc. may provide upon evaluation, in house service for repairs. The Variaxe Skimmer can be shipped prepaid to our location for inspection and quotation of repairs. The product return shipping can be billed via customer account, or added to invoice upon return shipment.

Thank you for your purchase. If you have any questions, or require product support please contact. 612-747-0877 or email request to realcoolantsolutions@gmail.com. Shipping address: 31307 144th Street, Princeton MN, 55371

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The entire program can be offered as a package, or components can be added and implemented as needed.

Return on investment can be realized in a very short time.



8. Emulsion Splitting Disposal Tank System



2. Refractometer used in every step of the process



3. Coolant Drum Mixer / Proportioning Blender



4. Clean Coolant Premix Transport Tank



Pass / Fail Coolant Testing



7. Portable Sump Cleaner, Filtration and Recycling System



6. Portable Coalescer for Tramp Oil Removal and Filtration of a 24-7 Production CNC



5. Portable Oil Skimmer for Daily Maintenance

