

Oil Skimmer with Rotating Impeller & Belt

Oil Skimmer for CNC Machines

Tramp Oil Removal & Coolant Circulation

Oil skimmer device ensures higher performance of metal working fluids and CNC machines by minimising oil contamination.



PRIMA Plus - SM

INDEX

- 01 Function of an Oil Skimmer
- 02 Skimmer Fitment Position Diagram on Coolant Tank
- 03 2D diagram of CleanOil Prima Plus - SM Skimmer
- 04 3D diagram of CleanOil Prima Plus - SM Skimmer
- 05 3D diagram of CleanOil Prima Plus - SM Skimmer
- 06 Working principle of the Cleanoil Skimmer
- 07 Timing modes of the Cleanoil skimmer
- 08 Belt Tightening Process
- 09 How to Mount CleanOil Prima Plus - SM Skimmer
- 10 Motor specifications, Electrical specifications and connection diagram
- 11 FAQ's

Oil Skimmer

Fixed Type

Primary function of an oil skimmer

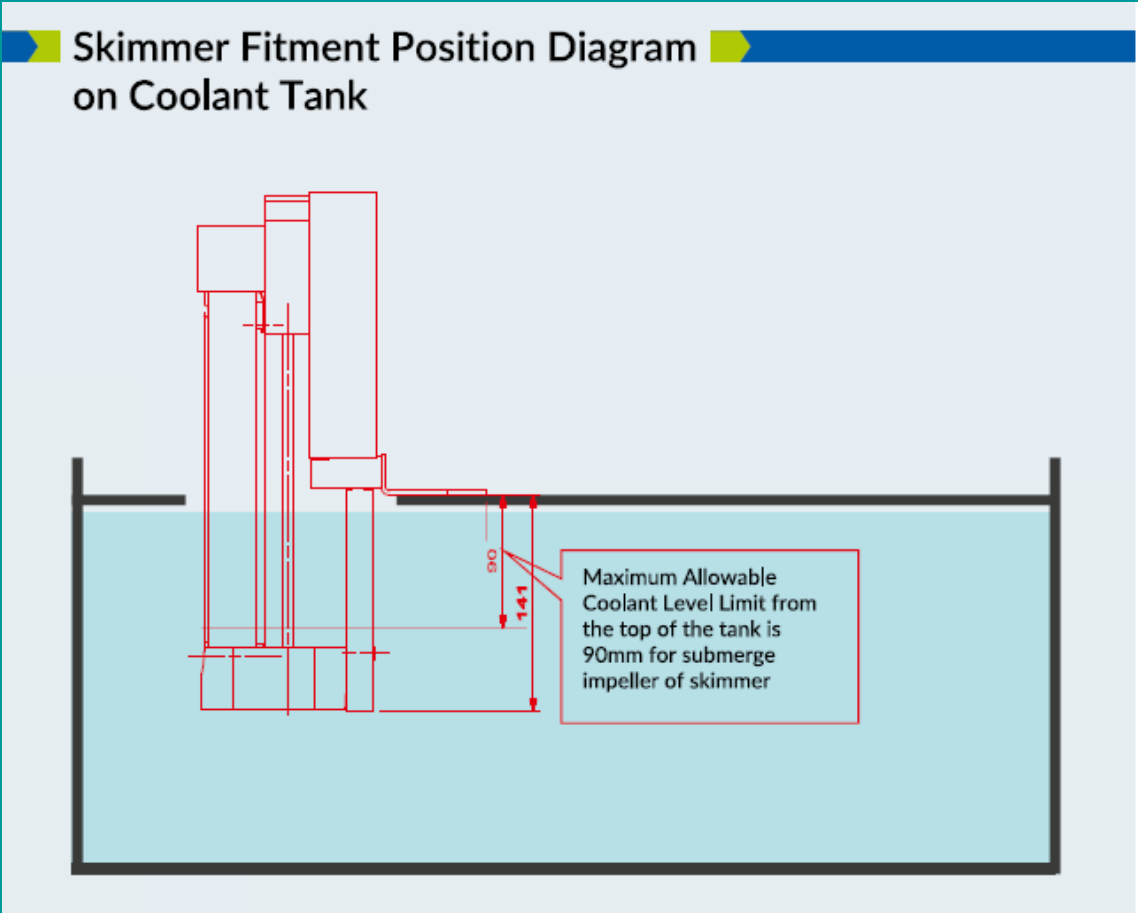
The skimmer's job is to remove the top layer of liquid (like tramp oil in CNC machines) that floats on another liquid (such as coolant) because the two liquids have different densities. In CNC machines, the skimmer clears away the unwanted tramp oil from the coolant tank. Getting rid of tramp oil helps the coolant last longer and keeps it working as it should



BEFORE



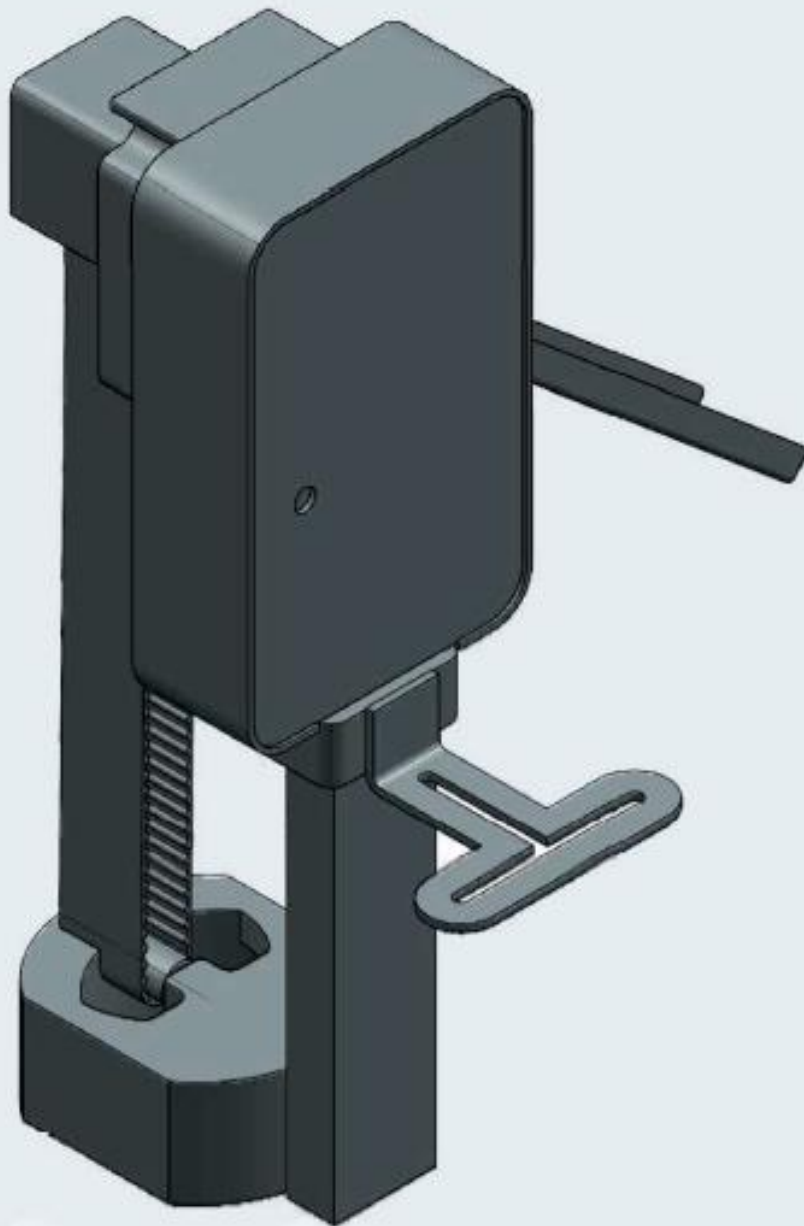
AFTER



Oil Skimmer

Fixed Type

3D diagram of CleanOil Prima
Plus - SM Skimmer



Working principle of the Cleanoil Skimmer

The Cleanoil skimmer uses both a rotating impeller and a belt. The impeller rotates inside the tank, guiding tramp oil toward the skimmer, while the belt removes the oil. These two components work together to collect and skim oil simultaneously, making it more efficient than other skimmers

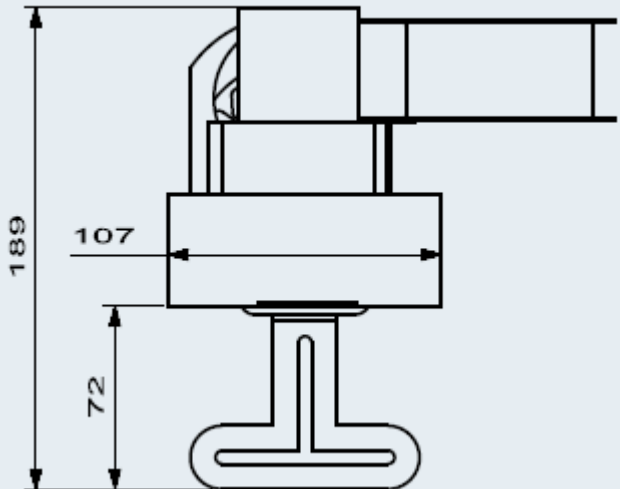
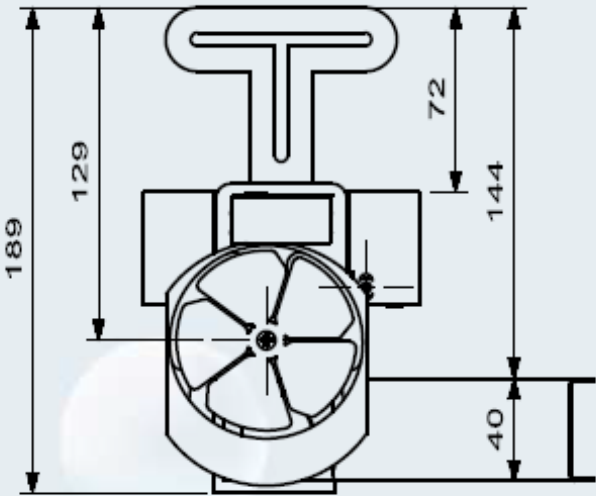
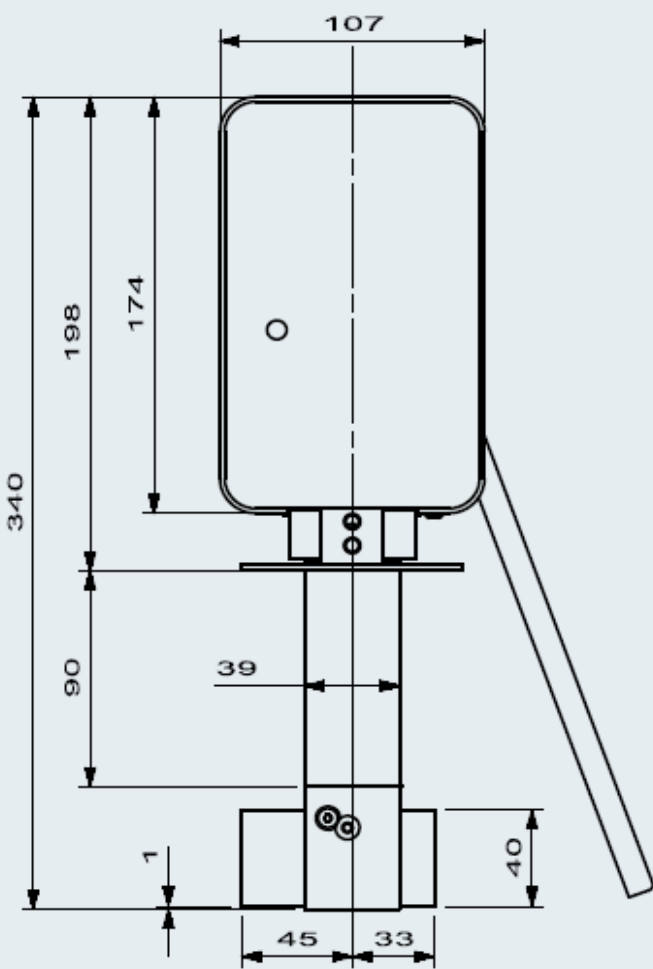
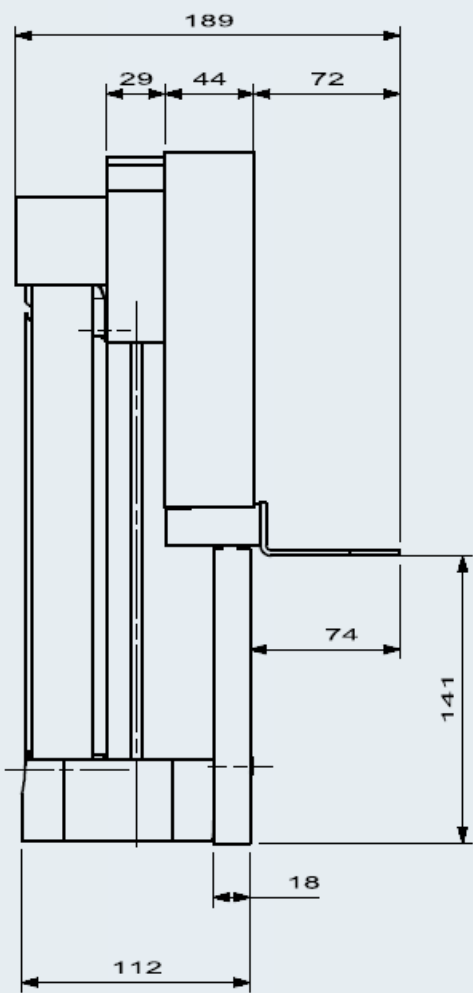


Oil Skimmer

Fixed Type



2D diagram of CleanOil Prima Plus - SM Skimmer



Timing modes of the Cleanoil skimmer

The amount of tramp oil in the coolant tank varies, so having skimmers run constantly isn't ideal. Some skimmers run 24/7, wasting coolant and electricity. Cleanoil skimmers offer three timing modes, allowing users to set the skimmer based on the amount of tramp oil present. This feature saves electricity, reduces wear and tear, and ensures only tramp oil is removed without wasting coolant

Timing mode options, and which is the best mode?

Cleanoil skimmers have three timing Modes :

A. 20:40 (Lite)

Skimmer runs for 20 minutes ON and 40 minutes OFF.

B. 40:20 (Medium)

Skimmer runs for 40 minutes ON and 20 minutes OFF.

C. 60:30 (Heavy)

Skimmer runs for 60 minutes ON and 30 minutes OFF.

If there's a lot of tramp oil, the skimmer can be set to the 60:30 mode for a few cycles. After that, the 40:20 or 20:40 modes are usually enough. In most cases, the 20:40 mode is sufficient, allowing the skimmer to run only about 6 hours a day



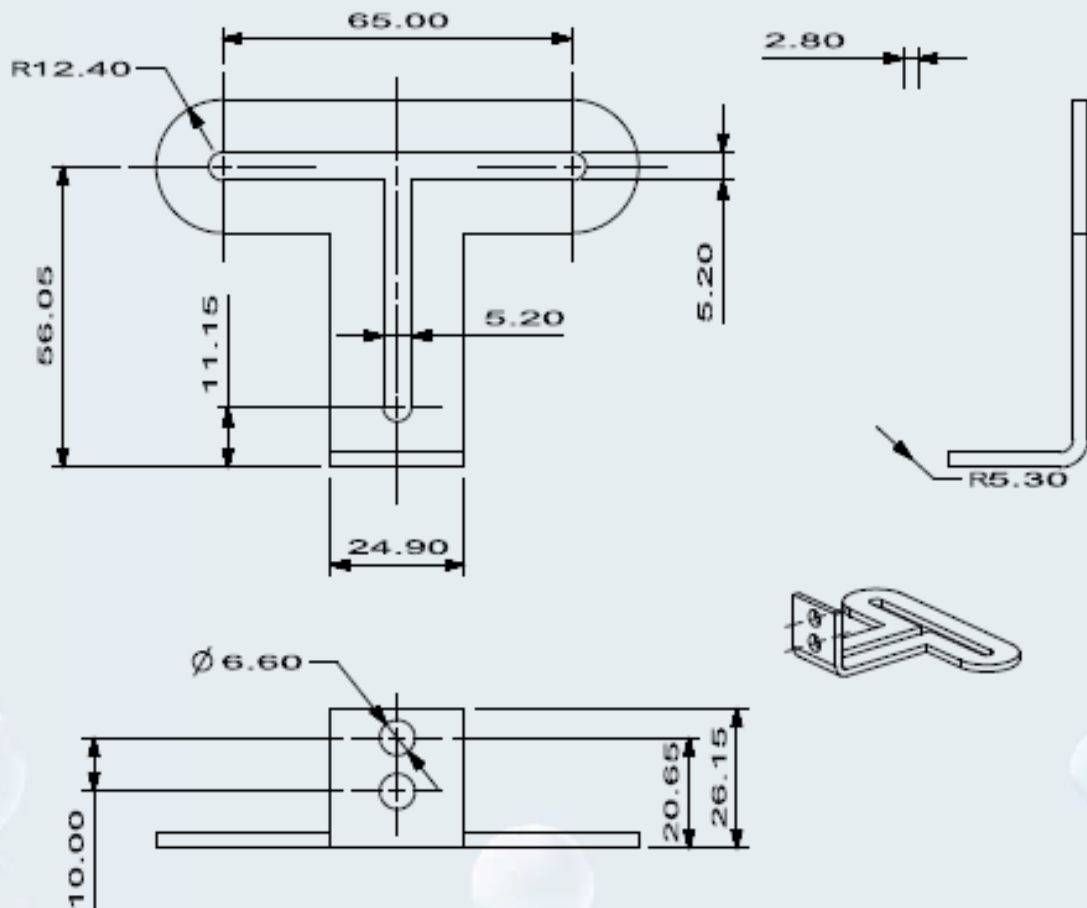
Belt Tightening Process

The belt's lifespan depends on factors like contamination and coolant condition. The Cleanoil skimmer has a quick adjustment mechanism to tighten the belt when needed. In general, the belt can last around a year, and frequent replacement is not necessary



How to Mount CleanOil Prima Plus - SM Skimmer

The CleanOil Prima Plus - SM Skimmer can be mounted on the coolant tank of the Machine with the help of Bracket shown in the diagram. The Mounting bracket can be fixed on the top of the coolant tank either with magnets (Provided with the Skimmer) or can be fixed with the bolts. If the Skimmer is mounted with the magnets the user will get advantage of removing the skimmer for any maintenance without any tool and in the shortest possible time.



Motor specifications, Electrical specifications and connection diagram

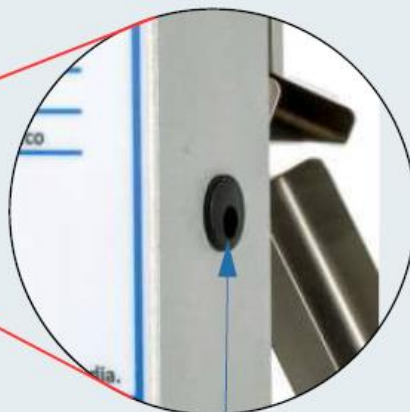
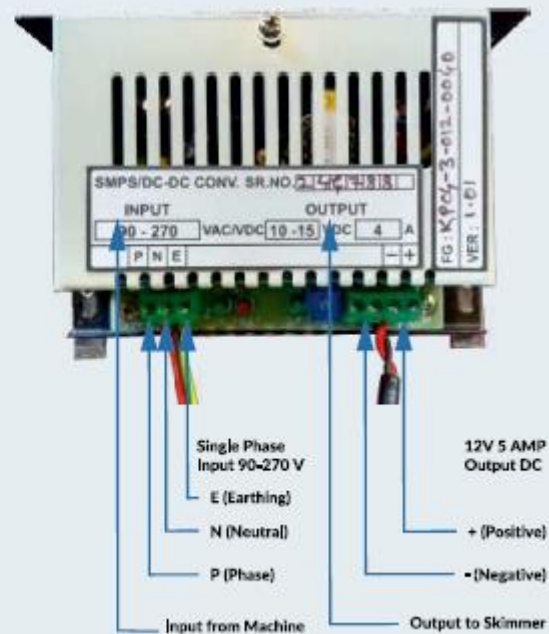
Electrical details of the motor used in the Cleanoil skimmer

The motor runs on 12V DC power, with a maximum current draw of 0.75A and 9W power consumption per hour.

Method 1: Power Input through SMPS Mounted in Machine Panel



Mounting Bracket of SMPS in Panel

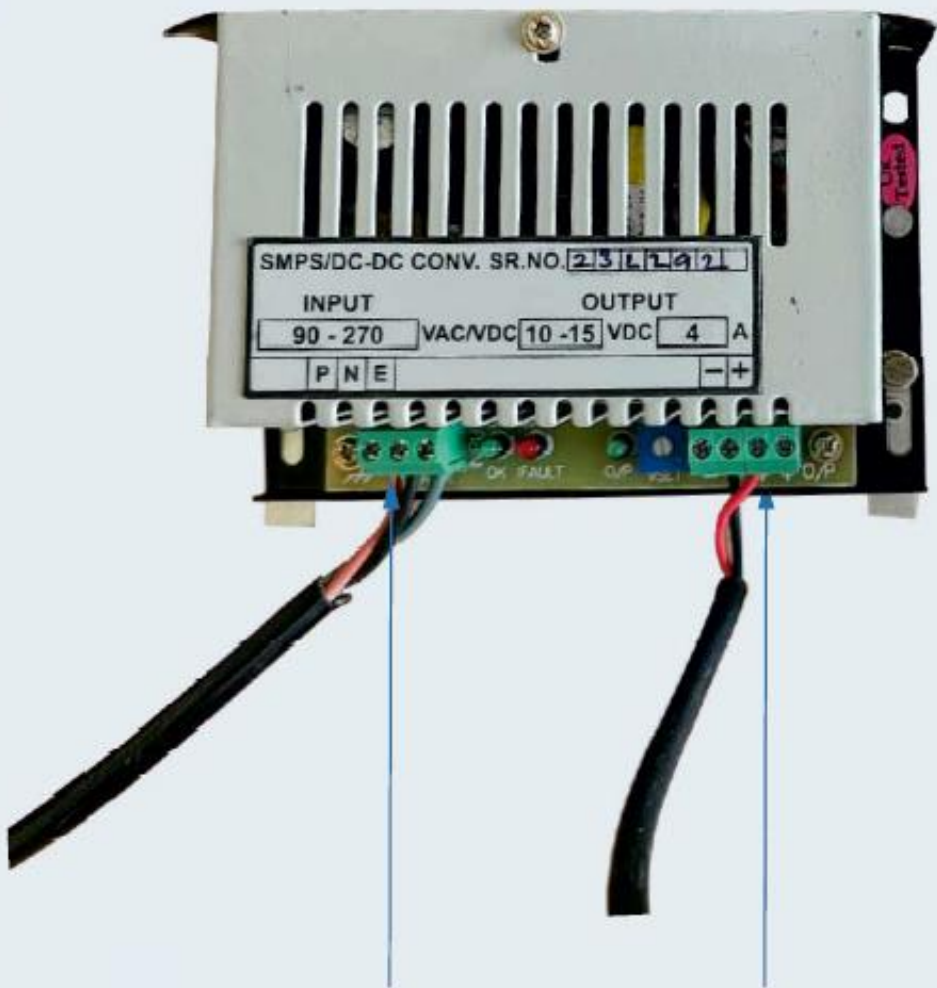


Power Input Jack



Power Input Socket to be inserted into Power Input Jack

Cable Details



Input Cable

3 core 0.5sqmm wire
for AC input

Output Cable

2 Core 0.75sqmm wire
for DC output

FAQ's

Q1. What is the primary function of an oil skimmer?

The skimmer removes tramp oil from coolant, extending coolant life and maintaining its effectiveness.

Q2. What is the source of tramp oil in the coolant tank of the machine?

Tramp oil comes from :

- Lubrication oil or grease from machine slides.
- Leaks in hydraulic fixtures.
- Oils or coatings on workpieces.

Q3. How does tramp oil negatively impact the machining process?

- Blocks oxygen, leading to bacterial growth and odors.
- Causes faster coolant degradation, increased usage, and color change.
- Results in inaccurate refractometer readings, foaming, lower pH, and reduced tool life

Q4. What types of oil skimmers are available in the market?

- Belt Type Skimmer
- Disk Type Skimmer
- Screw Type Skimmer
- Tube Type Skimmer

Q5. What is the working principle of the Cleanoil Skimmer?

It combines a rotating impeller and belt to collect and remove tramp oil efficiently.

Q6. Can increasing the width of the belt improve skimming efficiency?

A wider belt may pull out coolant, which is inefficient. The Cleanoil skimmer uses an impeller and belt for effective oil removal, making additional width unnecessary.

FAQ's

Q7. Why are there three timing modes in the Cleanoil skimmer?

To adjust operation based on tramp oil levels, conserving electricity and reducing wear and tear.

Q8. What are the timing mode options, and which is best?

- 20:40 (Light): 20 minutes ON, 40 minutes OFF.
- 40:20 (Medium): 40 minutes ON, 20 minutes OFF.
- 60:30 (Heavy): 60 minutes ON, 30 minutes OFF.
- Use 60:30 for high tramp oil levels, then switch to 40:20 or 20:40 as needed.

Q10. How long can the Cleanoil skimmer run continuously?

It can run indefinitely with the built-in timer managing ON and OFF cycles to prolong motor life.

Q11. Do we need a Cleanoil skimmer for each machine?

No, it is portable and adjustable, making it suitable for 5-6 machines

Q12. What materials is the Cleanoil skimmer made of?

Corrosion-resistant Aluminum 6061 and SS 304 with bearings in moving parts for durability.

Q13. What is the material of the Cleanoil skimmer belt?

Durable rubber timing belt.

Q14. How long does the Cleanoil skimmer belt last? Does it need frequent replacement?

Typically lasts about a year, with minimal need for frequent replacement

FAQ's

Q15. How much does the belt cost? Is it expensive?

Where can we buy it?

Costs less than 800 INR and can be bought from us or various suppliers.

Q16. Is replacing the belt time-consuming or difficult?

Simple and takes under 5 minutes.

Q17. Do we need any tools to replace the Cleanoil skimmer belt?

An Allen key is required.

Q18. Is the Cleanoil skimmer easy to maintain?

Yes, it disassembles in under 20 minutes, with all parts being replaceable and readily available.

Q19. Is there an AMC/servicing facility for the Cleanoil skimmer?

Yes, **KRISAI TECH , BANGALORE** offers AMC and service at a nominal cost after the warranty period.



Q20. What are the warranty terms for the Cleanoil skimmer?

Includes a one-year warranty on all parts except the belt. Parts will be replaced at no charge within the warranty period, excluding control panels with water or oil inside.

Q21. What are the motor's electrical specifications for the Cleanoil skimmer?

Operates on 12V DC power, with a maximum current draw of 0.75A and 9W power consumption per hour.

KRISAI TECH

NO.14, GROUND FLOOR,
GULMOHAR LAYOUT, BANJARA MAIN ROAD,
HORAMAVU, BANGALORE – 560043

Email : krisaitech3@gmail.com,sales@mintbykrisai.com
Web : www.mintbykrisai.com
Mobile : 7026185703 / 8147550703