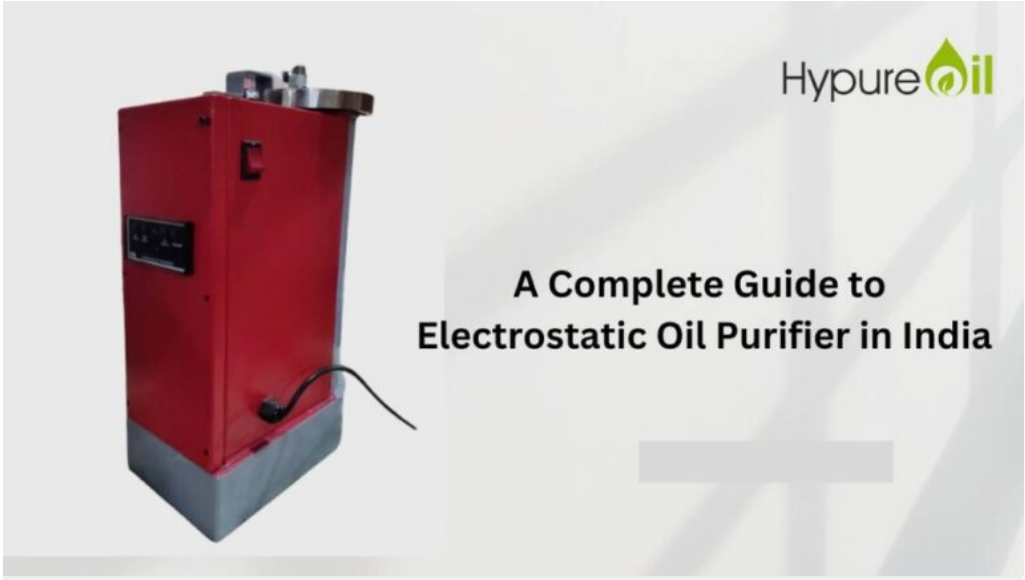
A COMPLETE GUIDE TO ELECTROSTATIC OIL PURIFIER IN INDIA



September 21, 2023 Hypureoil No Comments

An Electrostatic Oil Purifier in India is a device designed to remove impurities and contaminants from various types of oils, such as transformer oil or lubricating oil. It works on the principle of electrostatic precipitation, a process that utilizes electric fields to attract and capture particles. Here's a detailed understanding of how it works:
A detailed yet precise account of the process

· Inlet and pre-filtration:

The contaminated oil is first drawn into the Electrostatic Oil Purifier through an inlet. Before entering the electrostatic chamber, it often passes through pre-filtration systems like mesh filters or cyclone separators. These preliminary filters remove large particles and debris from the oil, preventing them from entering the electrostatic chamber.

· Electrostatic precipitation:

The heart of the Electrostatic Oil Purifier is the electrostatic chamber, which typically consists of two main components: a series of charged electrodes and a collection chamber.

(a) Electrodes: Inside the electrostatic chamber, there are pairs of charged electrodes. These electrodes are typically made of metal and are charged with high-voltage direct current (DC) electricity. One electrode is positively charged, and the other is negatively charged.

(b) Dielectric barrier: In between the pairs of electrodes, there's a dielectric barrier. This barrier helps maintain the separation between the positively and negatively charged electrodes.

· Ionization and particle charging:

As the oil flows through the electrostatic chamber, it passes very close to the charged electrodes. The high-voltage DC field created between the electrodes causes the molecules in the oil to ionize. This ionization process effectively charges the particles suspended in the oil. This includes both the negatively and positively charged particles.

(a) Positively charged particles: Positively charged particles, such as dust, soot, and other contaminants, are attracted to the negatively charged electrodes. These particles adhere to the surfaces of the negatively charged electrodes.

(b) Negatively charged electrodes: Conversely, negatively charged particles, which may include dissolved metals and other impurities, are attracted to the positively charged electrodes. They adhere to the positively charged electrodes.

· Particle collection:

The charged particles are collected on the surfaces of the electrodes, creating a layer of contaminants. Over time, this layer thickens as more particles are captured.

· Cleaning or regeneration:

Periodically, the Electrostatic Oil Purifier needs to undergo a cleaning or regeneration process. This is done to remove the accumulated contaminants from the electrodes. The process of regeneration differs from system to system because they use two different processes.

(a) Reverse polarity: Some systems reverse the polarity of the electrodes. This reverses the charges on the electrodes, causing the particles to detach and fall into a collection chamber or sump at the bottom of the purifier.

(b) Scrapping or rapping: In other systems, mechanical scrapers or rappers physically dislodge the accumulated contaminants from the electrodes. These particles then fall into

a collection chamber for removal.

· Clean oil outlet:

After the contaminants are removed from the oil, it exits the Electrostatic Oil Purifier as cleaner, purified oil. This oil can be returned to its original application, such as in a transformer or a lubrication system.

One can summarize that an Electrostatic Oil Purifier uses electrostatic precipitation to remove impurities from oil by charging the particles and attracting them to oppositely charged electrodes. This technology is highly effective at removing both solid and dissolved contaminants from various types of oils, extending the life of the oil and the equipment it serves.

Getting the best product so that you can enhance the life of your units. If you are looking for a better Electrostatic Oil Purifier than the ones you find anywhere else, you can get it from Hypure Oil.

One of the reasons why we're chosen by so many people worldwide, is the quality of the products that we sell. Not only that, but also the varied variety of products in this respect. Therefore, if you're looking for any other oil filtration products, visit our website asap.

Recommended Reads

What are the benefits of Hydraulic Oil Filtration?

What is Vacuum Dehydration Unit? What is the use of Vacuum Dehydrator

Transformer Oil Purifier: It's Functions and Benefits

Leave a Reply

Your name *

Your email *

Comments *

POST COMMENT

Search

RECENT POST

Everything To Know About A Cooking Oil Purifier

What Is Cold Pressed Oil Purifier And How Does It Work?

A Complete Guide To Gear Oil Purifier

Transformer Oil Purifier: It’s Functions And Benefits

What Is Vacuum Dehydration Unit? What Is The Use Of Vacuum Dehydrator

CATEGORIES

Hypure Oil Products

ABOUT US

From transformer oils to turbine oils, we ensure your machinery operates at peak performance, reducing downtime and maximizing efficiency up to an impressive scale.

OPENING HOURS

Mon - Sat 8:00 - 17:30,

Sunday - CLOSED

OUR PRODUCTS

Electrostatic Oil Purifier – EOP

Hyper Oil Purification System – HOPS

Low Temperature Vacuum Dehydration System – LTVDS

Mini Filter

NEWS & UPDATES

SEPTEMBER 19, 2023

WHAT ARE THE BENEFITS OF HYDRAULIC

SEPTEMBER 21, 2023

A COMPLETE GUIDE TO ELECTROSTATIC OIL

SEPTEMBER 22, 2023

WHAT IS VACUUM DEHYDRATION UNIT? WHAT

OUR FOOTPRINTS