

Oil Purifier

NEPHRON SYSTEM

Keep oil clean and realize long life of oil

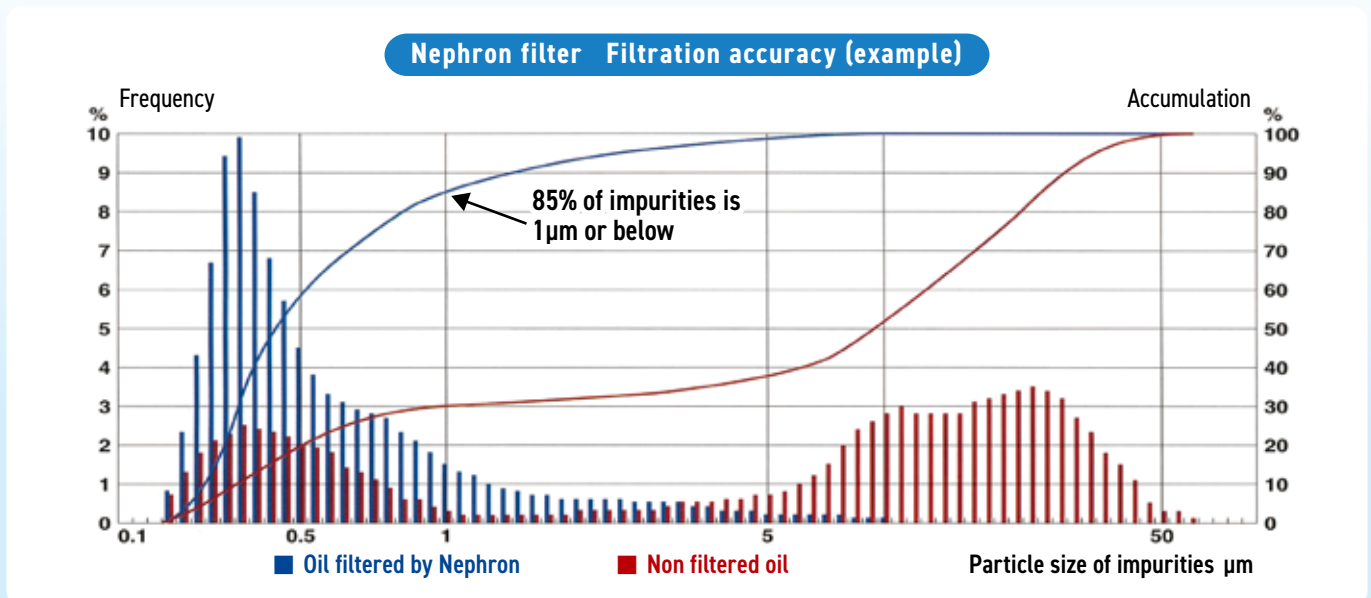
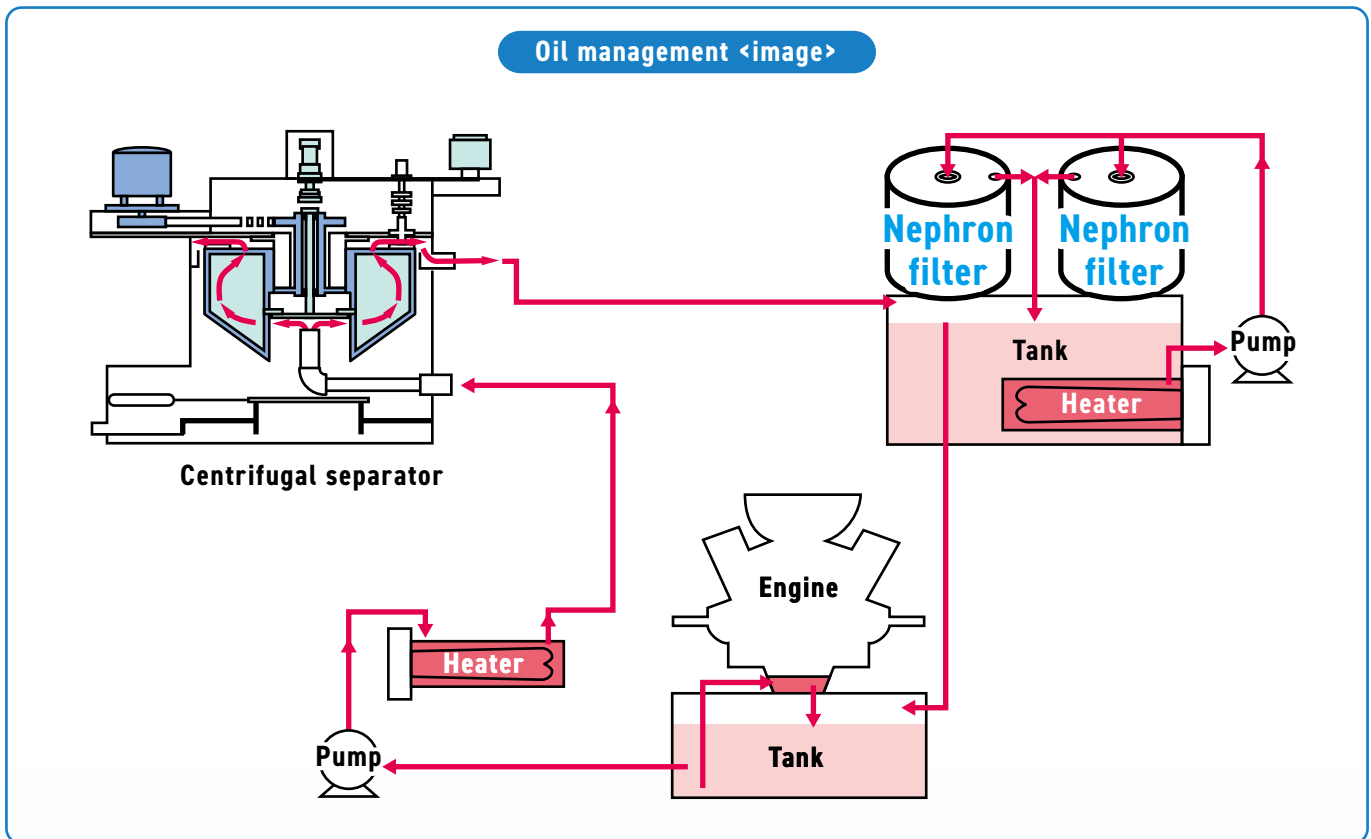


Feature of Nephron system

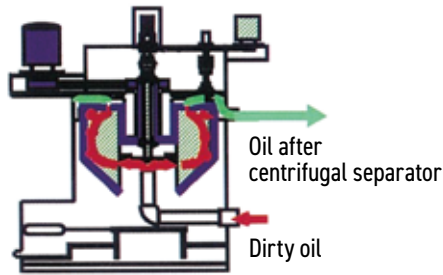
Nephron is the oil purifier system to make oil clean and longer life by replacing filter regularly. Nephron was developed based on its philosophy [not generating waste oil] for environmental issue. Nephron will realize a good performance and condition of the machine among a long time.

Realize the long life time of oil

In general, 90% of oil will be discarded due to contamination of impurities. However oil can be used for a long time if impurities are always removed. Reducing waste oil will contribute the environmental preservation and resources protection.



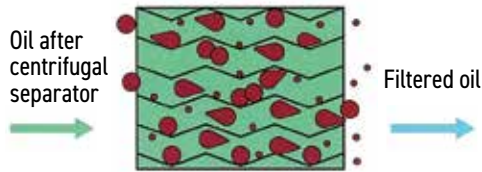
Centrifugal separator Removing impurities with 10 micron or more



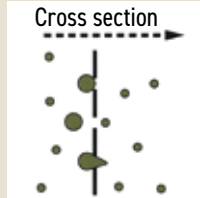
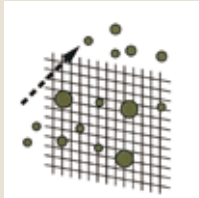
Centrifugal separator removes relatively larger impurities in oil. The impurity sludge can be scraped out easily by removing the cover.



Filter Collecting micron-unit impurities after centrifugal separator

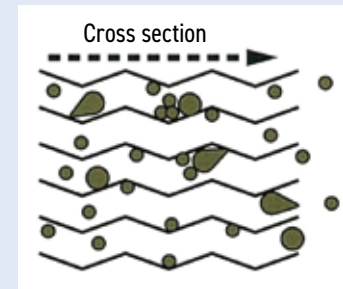
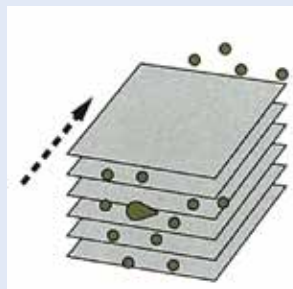


Standard filter



In case that filter mesh size is smaller for collecting more impurities, filter clogs easily.

Nephron filter



Impurities will be caught in the process of oil flow through layered filter paper. As impurities can be caught in the process from inlet to outlet, a lot of impurities can be caught without clogging.

Before filtering



Weight
20g

After filtering



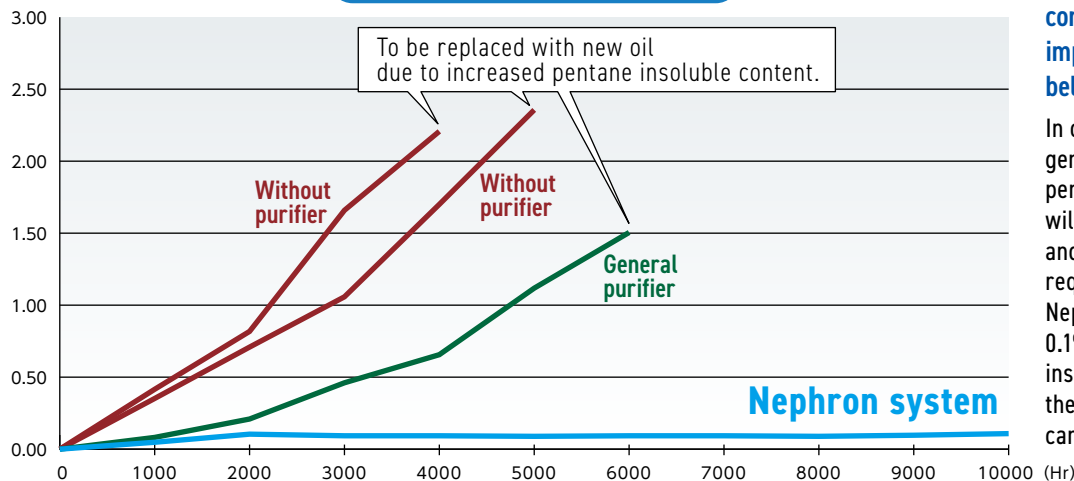
Weight
210g

Incinerated ash of
1/6 piece
"Nephron type 20"

10 times impurities
more than Nephron filter's
own weight can be collected.

Insoluble content %

Impurities in lubricating oil



Keeping pentane insoluble content showing amount of impurities in oil at 0.1% or below.

In case of non purifier or general purifier installed, pentane insoluble content will increase gradually and oil replacement is required. Meantime, Nephron system will keep 0.1% or below pentane insoluble content, therefore long life of oil can be realized.

Nephron system for diesel engine

Nephron system can be applied for diesels engine at both of marine and land use more than engine output 100kW.



SR-Z 30P-40HP



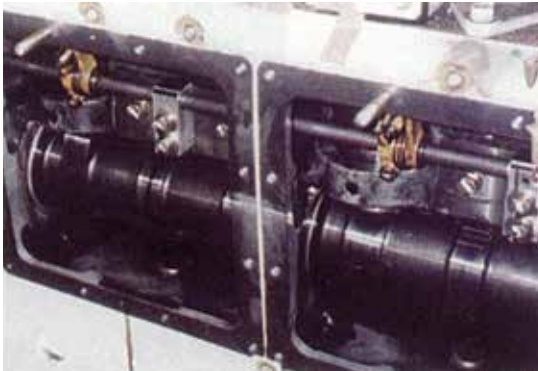
SR-Z 60P-60HP



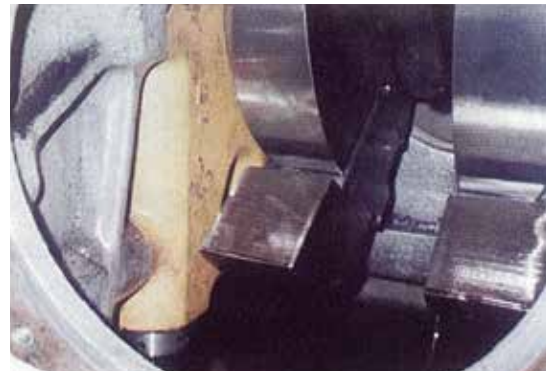
SR-Z 200PA-240HP-250

Engine condition applied Nephron system

Engine after 8,000 hours operation. Good condition without wear and scratch is confirmed.



Camshaft



Crank case



Bearing Metal



Cylinder head

Nephron type 20 filter for diesel engine

Nephron type 20 filter is mainly applied to engine oil, etc. It is filter with filter paper in pail can. As filter replacement is made by each pail can unit, overhaul is not required and maintenance is easy.

Eco Nephron type 20 filter which soaked in concentrated alkali additive can adjust base number and protect of oil oxidation.

Nephron type 20 filter

Capacity:
100L/h
Φ300×H365mm
About 6kg

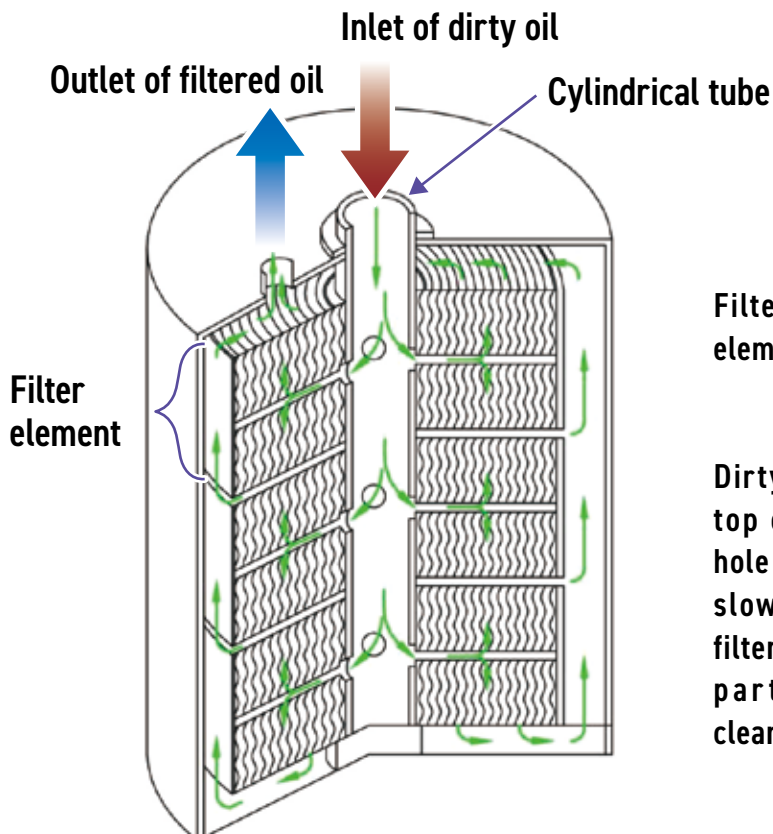


Eco Nephron type 20 filter Concentrated alkali

Capacity:
100L/h
Φ300×H365mm
About 11kg



Nephron type 20 filter Mechanism of filtering



Filter is made by accumulated filter element with three layer.

Dirty oil flows in cylindrical tube at top center and flow out from open hole at side of cylindrical tube. Then, slowly permeate filter element and filtered. and then flow out from upper part of the filter and return to cleaning oil tank.

Nephron system for fine filtering

By keeping oil clean, pump load can be less and electric power can be saved.



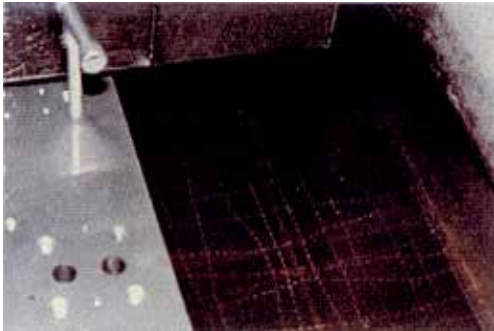
SR-Z 040HP



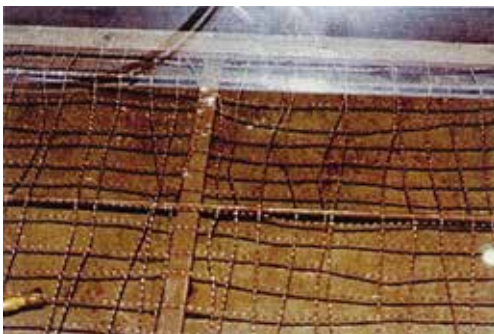
SR-Z 042HPW

Filtered Oil example (washing oil)

Washing oil before treatment



Washing oil after Nephron system filter

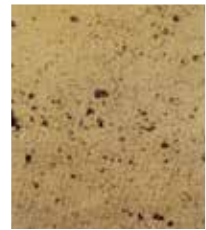


Filtered Oil example by chronology (turbine oil)

Without treatment



Photo by microscope



1st time filtered by Nephron



Photo by microscope



3rd time filtered by Nephron



Photo by microscope



6th time filtered Nephron



Photo by microscope



Paper tube filter for hydraulic oil

Paper tube filter is mainly applied for hydraulic oil, however it can be applied for general industrial lubricating oil and oil-based cutting oil, etc.

Since the material of filter and its body are made by paper, it is unable to use for water-glycol hydraulic oil and water-soluble cutting oil, etc.

Nephron 040 Type (CN) filter

Capacity:
50L/h
 $\phi 163 \times H240\text{mm}$



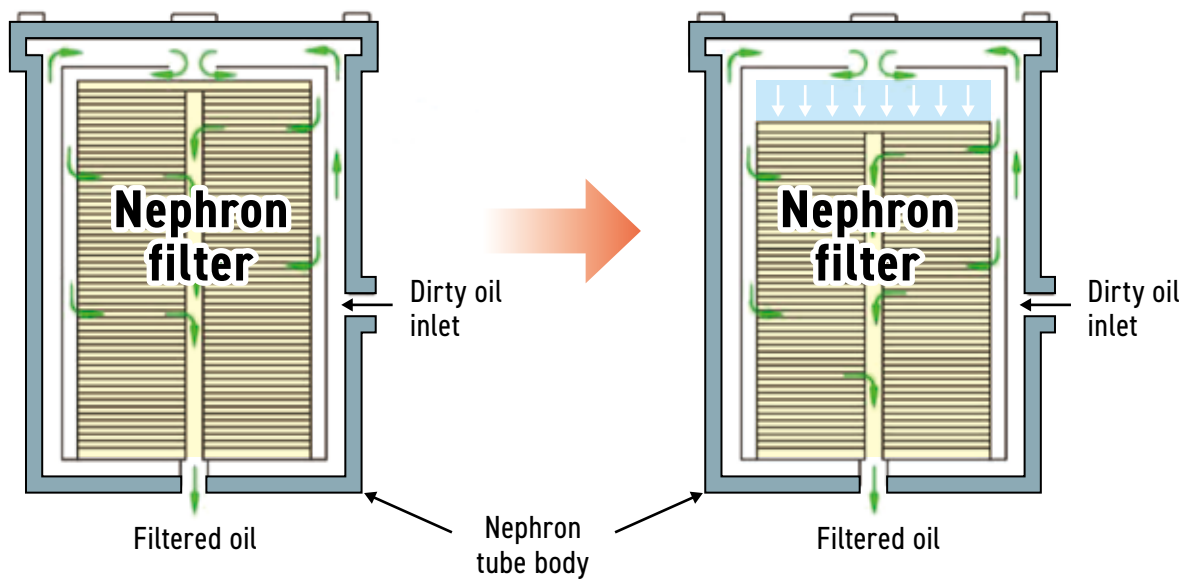
Nephron 042 Type (CN) filter

Capacity:
100L/h
 $\phi 163 \times H480\text{mm}$



Paper tube filter for hydraulic oil Filtering mechanism

By catching impurities of oil, filter paper will be sinking.



Dirty oil flows into cylindrical tube from the side of Nephron tube body and flow out filter's upper part to side of the Nephron filter. Dirty oil slowly penetrates filter's papers to clean and flow out from the bottom of Nephron tube body.

To satisfy all customers by providing high-quality products.

Akasaka Diesels Limited,
a marine diesel engine designing and manufacturing company
established in 1910.

Through the technical know-how cultivated by marine engine manufacturing,
we also produce various land-use items of casting, machined and test product, etc.



Contributing by high quality and technology.

Akasaka Diesels Limited

技術と品質で奉仕する **アカサカ**



認証レベル
エコステージ2-CMS

Sales Department

425-0074 670-6 Yanagiaraya, Yaizu city, Shizuoka

TEL : +8154-685-6166

FAX : +8154-685-6209

URL: <https://www.akasaka-diesel.jp> E-mail: info@akasaka.co.jp