

SKF

MEET THE RECONDOIL BOX FAMILY

ROBX3100 and ROBX2100



RecondOil

Don't change oil. Change to circular use of oil.

Up to 40 percent of all maintenance costs are lubricant related. With the RecondOil Box, you can use the same oil again and again by keeping it ultra clean throughout its entire life, without losing any of its original properties. This means your machines run better, require less downtime and last longer, while you move toward a more sustainable and predictable way of maintaining your assets.

40%

Oil can account for 5% of your maintenance budget, but affects 40% of maintenance costs.



The industrial oil challenge

Industrial oil degrades over time. In today's linear approach to lubrication, oil is discarded once degradation reaches a point where performance can no longer be guaranteed. Only a small portion is ever recycled. Contamination is the main driver of degradation. Left unchecked, particles, varnish and water accelerate oxidation, reduce oil performance and shorten machine life. The result is high costs, frequent changeouts and unnecessary environmental impact.



SKF RecondOil Box makes it possible to use the same oil over and over again.



Why circularity matters

If particles, varnish and water are left unchecked in a system, they cause the oil to continually degrade until it is no longer functional. By removing these contaminants continuously, the RecondOil Box preserves the oil's original properties and transforms it from a consumable product into a long-term asset. This is the foundation of a circular use of lubricants, keeping oil performing like new instead of replacing it when it degrades.

A circular use of oil delivers:

Extended oil life

Continuously regenerates oil back to its as-new condition, enabling long-term use without degradation.

Environmental responsibility

Significantly reduces CO₂ emissions and lowers environmental impact across the lubrication workflow.

Cost savings

Reduces the frequency of oil changes and the costs associated with purchasing, handling and disposing of used oil.

Enhanced equipment performance

Keeps machines running smoothly with less wear and more consistent output. Improves machine reliability, product quality and operational uptime.



One system – three functions

The RecondOil Box is an offline kidney loop system that continuously cleans oil without interfering with the main lubrication system. Powered by Double Separation Technology (DST), it removes contaminants without being limited by traditional filter pore size. This means there is no lower limit to the particle size it can eliminate.



Nanoparticles

Our system removes nanoparticles and all other particles, effectively preventing oxidation before it starts and potentially extending oil life indefinitely.



Varnish

The system removes both soluble and insoluble varnish. This helps prevent clogs, reduce operating temperatures and extend the lifespan of both components and oil.



Water

The RecondOil Box efficiently removes dissolved, emulsified and free water from oil, ensuring optimal system performance.

99%

RecondOil Box reduces
CO₂ emissions by 99 percent

Meet the RecondOil Box family

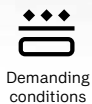
Two solutions built on the same proven depth-filtration technology, designed for different operating environments. Both the ROBX2100 and ROBX3100 deliver exceptionally clean oil through continuous filtration. The difference lies in where they are used and how the system is controlled.



Choose ROBX3100 when digital control and insight are required

The ROBX3100 is optimised for indoor environments, where digital control, monitoring and operational insight enable predictable and efficient oil maintenance.

- Optimised cleaning through intelligent digital control and automatic regulation
- Predictable cleaning with real-time operational insight
- Energy-efficient motor, onboard display and smart alarms for improved process efficiency
- Cloud connectivity, including available 5G communication options, enables remote monitoring through RecondOil Monitoring System (ROMS)



Choose ROBX2100 when durability is decisive

The ROBX2100 is designed for demanding conditions and outdoor applications, where durability, mechanical integrity and uninterrupted operation are critical.

- Fully analogue, streamlined design with minimal electronics
- Dependable off-line cleaning, reducing downtime and improving machine reliability
- High-inertia motor ensures stable operation under heavy contamination

A quick guide to selecting the right model based on desired features

Feature	ROBX2100	ROBX3100
Superior depth filtration	X	X
Digital controls	–	X
Sensor integration	–	X
Monitor actual values	–	X
Monitor historical values	–	X
Smart alarms	–	X
Remote monitoring	–	X
Energy-efficient operation	–	X
Build for demanding conditions	X	–
Suitable for tough handling	X	–
Predictability and optimisation	–	X
Handles unpredictable particle size	X	–
Low viscous fluids (<20 cSt)	X	–
Hazardous environments	X ¹⁾	–

¹⁾ ROBX2100 is also available in an ATEX-certified version for use in hazardous gas and dust atmospheres (Zone 1/21 and Zone 2/22)



ROBX3100 – intelligent and optimised

The ROBX3100 brings full digital control to RecondOil depth filtration. Designed for stable indoor conditions and continuous improvement, it combines intelligent regulation with powerful insight tools. The 31-series is ideal for users aiming for predictable, optimised and insight-driven oil maintenance.



Key advantages

- Digital control system for optimal cleaning
- Automatic pressure regulation
- Touch display for easy operation
- Capability for real-time monitoring and data logging
- Smart alarms for thresholds and unexpected events
- Energy-efficient motor (~0.9 kWh/year)
- Connectivity for trend analysis and predictive action
- Configurable with 1–8 filter housings



Best suited for

Indoor applications in manufacturing, process industries, machine halls and automated production environments.

Cloud-connected monitoring

Optional cloud connectivity provides remote access to performance data, oil condition trends and system status through RecondOil Monitoring System (ROMS).



Wall-mounted



Floor-standing with legs



Trolley

Multiple housings

Available in configurations with multiple filter housings, allowing the system to be scaled to match oil volume, contamination level and performance requirements. The number of housings can be adapted to the application, providing flexibility both at installation and over time.

Flexible installation options

Available in multiple installation and mobility variants, including wall-mounted, floor-standing with legs, and mobile trolley configurations.

ROBX3100 accessories and sensors

To unlock the full potential of the ROB3100, a range of optional accessories and sensors can be added to enhance insight, ensure stable performance and support smarter maintenance planning.

Combined with cloud-based monitoring through ROMS, these components provide real-time visibility, early warnings and actionable insights for optimised operation.



Temperature sensor

This sensor tracks variations in the operating oil temperature, supporting process stability and early detection of abnormal conditions.

Temperature range: -50 to 150 °C.



Moisture and temperature sensor

A combined sensor that measures both water content and temperature fluctuations in the operating oil, giving valuable insight into contamination and process health.

Temperature range: -40 to 120 °C.



Particle counter kit

A complete monitoring package that provides real-time measurement of particle levels, moisture content and oil temperature. The kit includes a datalogger and USB interface for downloading operational data, ensuring reliable monitoring in industrial environments.



Leakage sensor

A stainless-steel leakage sensor monitors the spill tray and provides a warning when oil levels begin to rise, helping operators detect issues early and prevent unnecessary downtime.



Pre-strainer kit

The pre-strainer is installed before the pump to stop coarse contaminants and prevent blockages caused by larger particles (>90 µm). It includes a mesh wire filter element, vacuum indicator, bypass valve (opens at 0.3 bar) and a 1/2" BSP oil connection. The pre-strainer is especially useful in systems containing sludge or in applications where the RecondOil Box is the only filtration unit.



Heavy-duty frame

For demanding industrial setups, a reinforced frame can replace the standard legs. This sturdier construction increases durability and stability in environments with heavy vibration or mechanical stress. It offers flexible mounting options for wall or floor installation.

ROBX2100 – analogue and streamlined

The ROBX2100 delivers RecondOil depth filtration through a simple, fully mechanical design. With minimal electronics and a high-inertia motor, it maintains steady operation even under heavy contamination loads. The 21-series is the dependable choice when durability, simplicity and continuous operation are the highest priorities.



Flexible installation options

Available in multiple installation and mobility variants, including wall-mounted, floor-standing with legs, and mobile cart configurations.



Wall-mounted



Floor-standing with legs



Cart

Best suited for

Industries with demanding conditions and outdoor installations, including metal processing, pulp and paper, cement, mining and power generation.

Multiple housings

Available in configurations with multiple filter housings, allowing filtration capacity to be scaled to match oil volume, contamination levels and operating conditions. This makes the ROB2100 well suited for demanding applications where continuous filtration is required.



Key advantages

- Mechanically driven, low-sensitivity design
- High-inertia motor pushes through particle loads
- Resistant to vibrations, shocks and water ingress
- No digital controls – simply runs until you choose to stop it
- Ideal for demanding industrial environments
- Also available as a mobile cart
- Configurable with 1–8 filter housings



Two complementary depth filters, working in synergy

The RecondOil Box uses advanced depth-filtration technology designed to remove a wide spectrum of contaminants and restore oil to an ultra-clean condition. Filtration is performed through two complementary depth filters, working in sequence as part of an intelligent filtration concept. As the oil flows vertically through axial gaps between tightly layered cellulose sheets, contaminants are captured step by step, forming the foundation for stable machine performance and long-term circular oil use.



RecondOil Core

The Core filter is the first line of filtration, designed to remove coarse and heavy contaminants through depth filtration. It plays an essential role in protecting both oil and machinery by efficiently capturing particles, varnish residues and water, while preparing the oil for further purification.



RecondOil Boost (DST-activated)

The Boost filter provides further purification by applying depth filtration enhanced with SKF RecondOil Double Separation Technology (DST). By combining mechanical and chemical separation, it enables nano-level filtration and accelerates the removal of varnish, oxidation byproducts and water. Used in sequence with the Core filter, the two filters work in synergy as a dual-stage filtration process, making continuous circular oil use possible.



Core



Boost

Learn more about
RecondOil Box filters

Get started with SKF RecondOil Box

The process is simple and designed to ensure a smooth and efficient transition, from initial assessment to operation, follow-up and long-term results.

1

Identify the right application

Determine where the solution delivers the greatest value in terms of sustainability, cost savings and performance.

2

Choose the right setup

Together, we define the optimal RecondOil Box solution, service level and configuration for your specific needs.

3

Install and connect the system

RecondOil Box is easily connected to existing equipment without interfering with machine operations.

4

Start the purification process

Once the system is running, the oil is continuously purified in the background.

5

Follow up and optimise over time

Through service, oil analysis and follow-up, you achieve long-term results and stable performance.



Proven in the field

SKF RecondOil solutions are already delivering measurable impact in real industrial environments around the world. From reducing varnish-related failures to extending asset life, our technology helps customers improve production reliability while supporting their sustainability goals.

Real-world case studies

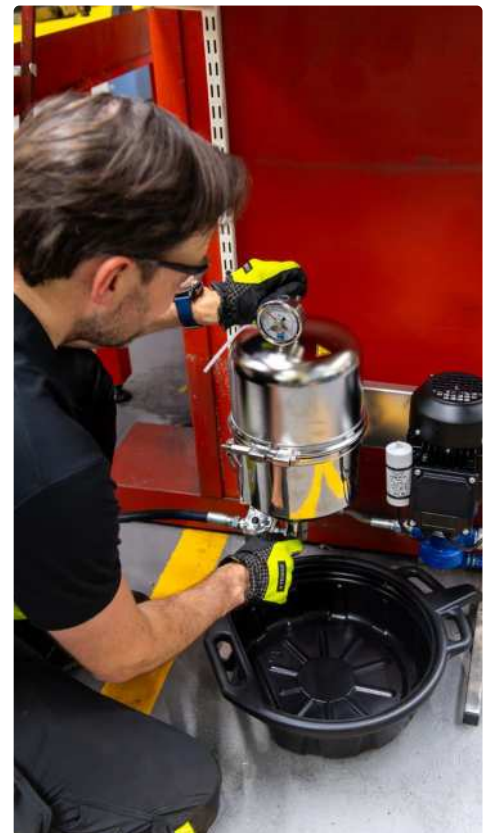
How does RecondOil Box perform in practice? Our case studies from a wide range of industries show how customers are transforming their lubrication processes and achieving measurable results.

- Longer machine life through cleaner oil
- Fewer unplanned shutdowns
- Reduced oil consumption and disposal requirements
- More predictable lubrication performance
- Lower environmental footprint

Backed by research and science

SKF's expertise in circular lubrication is supported by white papers and technical publications that provide deeper insight into:

- Contamination mechanisms in industrial oil
- The role of nano-level separation in oxidation prevention
- Environmental impact reduction through circular lubrication
- Real-world performance of DST-enabled systems
- Lifecycle cost comparisons with conventional filtration



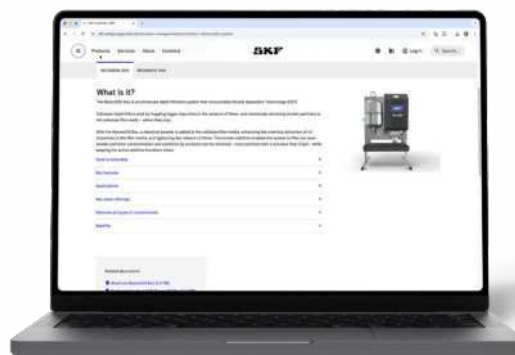
ROBX 2100 with visual flow and frame

Explore our knowledge hub

Access case studies, white papers and expert insights that help you understand and implement circular lubrication in your operation.

In our knowledge hub, you will find:

- Case studies with real-world results across industries
- White papers with in-depth technical insights into oil cleanliness and DST
- Tools and guidance including impact and ROI support, as well as planning checklists
- Expert insights with practical advice on how to start circular lubrication in your plant



Knowledge hub
at SKF.com



ROBX 3100 with display, spill tray and legs



skf.com

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