

KLEENFUEL ELAIS™

Elais™ – Diesel Fuel Cleaning System

Elais™ is a compact, portable diesel fuel cleaning unit engineered for continuous removal of particulates (down to 3 microns), water, and ferrous contaminants. Housed in a rugged 16-inch cube and powered by a 12V or 240V pump, it combines Kleenoil Kleenfuel™ depth filtration with a built-in magnetic core for advanced fuel polishing. Designed for use during storage, transfer, or in-tank circulation, Elais ensures ISO-clean diesel—protecting modern engines, reducing emissions, and supporting compliance with Euro 6, Stage V, and Tier 4 standards.



Key Benefits of Elais™

1. ISO-Clean Fuel Quality

- Removes particles down to 3 microns absolute
- Achieves ISO 18/16/13 or better fuel cleanliness

2. Complete Water Removal

- Absorbs free, emulsified, and suspended water
- Prevents corrosion, microbial growth, and injector damage

3. Magnetic Filtration Core

- Integrated 4000-gauss magnet captures all ferrous debris
- Adds a secondary layer of protection for sensitive fuel systems

4. Flexible Power Options

- Operates on 12V battery, 240V mains (via converter), or Kleenoil power pack
- Ideal for field use, workshops, or mobile setups

5. Multi-Mode Operation

- Use for in-tank circulation, fuel transfers, or scheduled cleaning cycles
- Cleans fuel while machines are running, idling, or shut down

6. Low Maintenance

- Only requires a quarterly Kleenfuel™ cartridge change and magnet wipe
- Clear prefilter allows for instant visual inspection

7. Visual & Verified Results

- Supports before-and-after fuel sampling
- Optional lab-tested ISO cleanliness reports available

8. Portable & Compact Design

- Lightweight, rugged 16-inch metal housing
- Includes optional carry strap for easy transport

9. Emissions & Engine Protection

- Improves fuel combustion efficiency
- Reduces DPF regenerations and supports Tier 4 Final / Euro 6 compliance

10. OEM Warranty & ESG Support

- Aligns with manufacturer fuel cleanliness specs
- Helps meet environmental targets and extend equipment life

How Elais™ Works

Elais™ draws diesel fuel from a tank or container using a built-in 12V or 240V pump, circulating it through a high-efficiency Kleenfuel™ depth filter that removes particles down to 3 microns and absorbs all water content. A powerful 4000-gauss magnetic core captures ferrous contaminants before clean fuel is returned to the tank. It operates during fuel storage, transfer, or directly in the tank—providing continuous, automated fuel cleaning with minimal setup and maintenance.

Technical Specifications

Kleenfuel ELAIS™ Fuel Cleaning System

General Information

Manufacturer	KLEENOIL
Model	Kleenfuel ELAIS™
System Type	Diesel Fuel Cleaning Unit

Filtration Performance

Filtration Rating	3 microns absolute
Water Absorption Capacity	Up to 700 ml per cartridge
Cleanliness Level Achievable	ISO 18/16/13 or better

Flow & Operation

Flow Rate	500 litres/hour (in 'Hare' mode)
Power Supply	12V or 24V DC
Max Continuous Run Time	Up to 8 hours (Hare mode) / 2 hours (Tortoise mode)
Integrated Pressure Cut-off	3 bar (built-in safety feature)
System Weight	16.25 kg
Dimensions (L x W x H)	380mm x 355mm x 380mm (inc handles/prefilter)

Pump Specifications

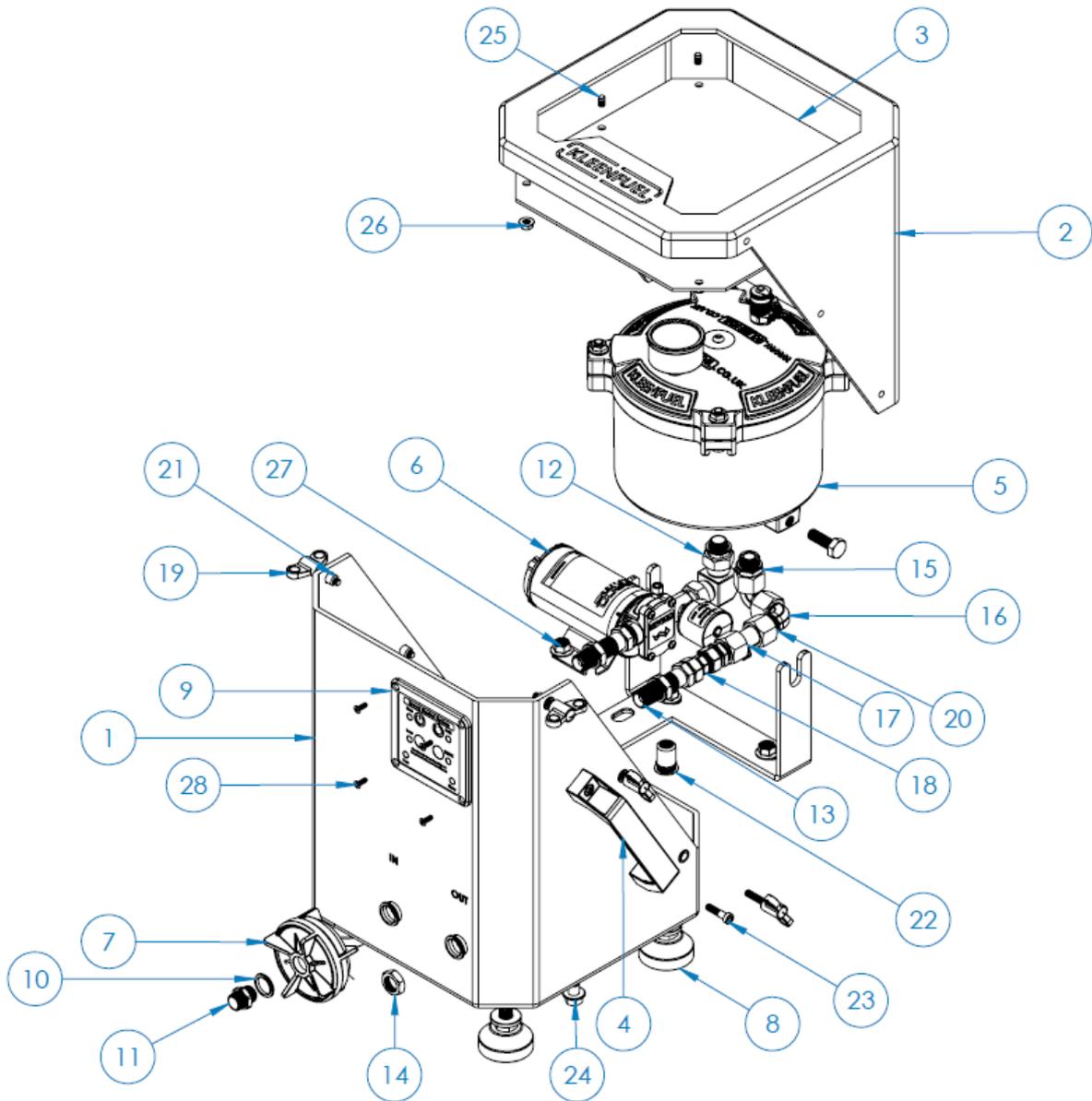
Make	Marco
Model	UP3/E-BR
Voltage	12V / 24V DC
Max Run Time	8 hours continuous
Integrated Pressure Cut-off	3 bar
Operating Temperature Range	-10°C to +60°C (14°F to 140°F)

⚠ Note: Temperature limits apply to all pump components. Exceeding these limits may result in damage or malfunction.

Filter Housing & Cartridge

Filter Housing Make	Kleenoil
Model	Kleenfuel
Filter Cartridge	12V / 24V DC
Max Run Time	Genuine Kleenfuel filter
Suggested Replacement Interval	3 bar
Operating Temperature Range	Every 500 operating hrs or 3 m'th, whichever comes first

BOM – ELAIS Explosion Drawing



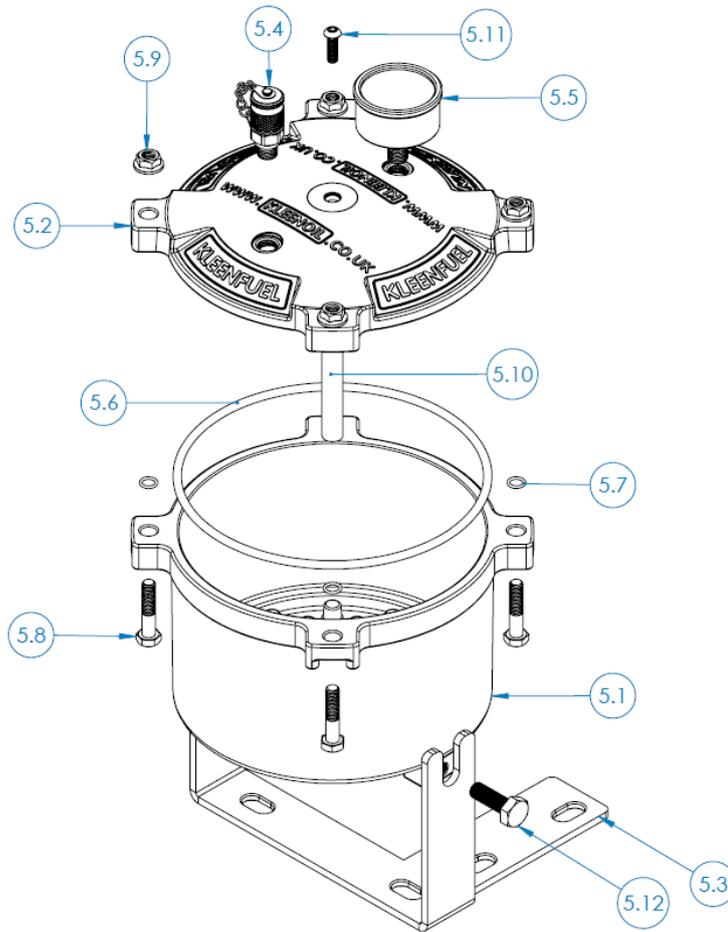
Bill of Materials (BOM)

ITEM NO	TITLE	QTY.
1	Elais Base	1
2	Elais Lid	1
3	Acrylic Window	1
4	Handle	2
5	Kleenfuel - Assembly	1
6	UP3-E-BR_50 – Marco Pump (OTS)	1
7	Rock Catcher (OTS)	1

Bill of Materials (BOM)

ITEM NO	TITLE	QTY.
8	Leveling Feet, SS Base, M12 x 1.75 mm Threaded Stud (OTS)	4
9	Pump Speed Control System (OTS)	1
10	316 Stainless Steel, 3/8 Dowty for Pipe Fittings (OTS)	8
11	316 Stainless Steel Threaded Pipe Fitting, Straight Connector, 3/8 BSP Male to Male (OTS)	3
12	316 Stainless Steel Threaded Pipe Fitting, 90 Degree Elbow Connector, 3/8 BSP Female to Female (OTS)	1
13	316 Stainless Steel Pipe Fitting, Extra Long Straight Bulkhead Connector, 3/8 BSP Male to Male (OTS)	2
14	316 Stainless Steel Bulkhead 3/8 BSP Male (OTS)	3
15	316 Stainless Steel Pipe Fitting, Adapter, 3/8 BSP Male x 12L UNUNF Male (OTS)	2
16	316 Stainless Steel 12L Compact 90° Female to Male (OTS)	2
17	316 Stainless Steel 12L Pipe (OTS)	1
18	316 Stainless Steel Pipe Fitting, Adapter with Swivel, 3/8 BSP Female to Female	1
19	Wing Nut-EWN. 48 SST-p-M6 x16-C17 Green (OTS)	6
20	316 Stainless Steel 12L Hex Nut (OTS)	2
21	18-8 Stainless Steel Rivet Nut, M6 x 1mm Thread Size, for 4.2mm to 6.6mm Material Thickness (OTS)	10
22	18-8 Stainless Steel Rivet Nut, M12 x 1.75mm Thread, for 5.1mm to 8.9mm Material Thickness (OTS)	4
23	Alloy Steel Socket Head Screw, Black-Oxide, M6 x 1 mm Thread, 25 mm Long, Partially Threaded (OTS)	4
24	JIS High-Strength Steel Flanged Hex Head Screw, M10 x 1.25 mm Thread, 25 mm Long (OTS)	4
25	Threaded on One End Steel Stud, M6 x 1 mm Thread Size, 10 mm Long (OTS)	6
26	Medium-Strength Steel JIS Flange Nuts, M6 x 1.00 mm Thread Size (OTS)	6
27	Medium-Strength Steel JIS Flange Nuts, M10 x 1.25 mm Thread Size (OTS)	4
28	Stainless Steel Flat Head Thread-Forming Screws, 90 Degree Countersink, M4 Size, 12mm Long (OTS)	8
29	Supply Cord (OTS)	1

BOM – ELAIS KLEENFUEL UNIT



Bill of Materials (BOM)

ITEM NO	TITLE	QTY.
5.1	Kleenfuel - Body	1
5.2	Kleenfuel - Lid	1
5.3	Mounting Bracket For KLEENFUEL & Pump	1
5.4	1/8 BSP Male Test Port (OTS)	1
5.5	Pressure Gauge with Steel Case, 0-160 PSI - 1/4 BSP Center Back Connection	1
5.6	368 Silicon O-Ring for Kleenfuel (OTS)	1
5.7	Silicon O-Ring (OTS)	4
5.8	Stainless Steel Hex Head Screw, M8 x 1.25mm, 35mm Long, Partially Threaded	4
5.9	Medium-Strength Steel Flange Nut-Class 8 Zinc Plated, M8 x 1.25 mm Thread	4
5.10	Magnetic Rod, 4000 Gauss, 80 mm length (OTS)	1
5.11	Button Head Hex Drive Screw, 18-8 Stainless Steel, M6 x 1 mm, 20 mm Long	1
5.12	Medium-Strength Class 8.8 Steel Hex Head Screw, M10 x 1 mm, 30 mm Long	2

Accessories & Spares

Enhance the flexibility and performance of your Elais™ Fuel Cleaning System with these genuine Kleenoil spares and optional extras

ITEM	DESCRIPTION
Kleenoil Battery Pack With CHARGER AND CONNECTORS	Rechargeable portable power source for field use—ideal for remote or off-grid locations
240V Converter	Enables operation from standard mains power for workshop or static setups
Battery Connection Cable (XT60 to Crocodile Clips)	Plug-and-play cable for direct connection to 12V vehicle or machinery batteries
Carry Strap	Heavy-duty strap for easier transport and handling onsite
Spare Kleenfuel™ Cartridge	Recommended spare for routine quarterly replacements
Clear Prefilter Bowl	Optional replacement or field-service spare for visual fuel monitoring
Full Internal Replacement Kit (with Pump)	Complete internal module including pump for service replacement or refurbishment
Spare Fuel Pipes (Feed & Return)	Extra or replacement fuelsafe hoses for different installations
Earth Lead	Optional replacement ground cable for mobile or outdoor use
Wing Nuts & Lid Bolt Set	Replacement hardware set for securing top lid

Typical Applications

The Elais™ Fuel Cleaning System is suitable for use across a wide range of industries and environments where diesel fuel quality is critical. It can be deployed for:

- In-tank circulation for mobile and stationary machinery
- Clean fuel transfers from storage to equipment or vehicles
- Fuel polishing in bulk tanks, IBC containers, or onboard tanks

Common use cases include:

-  Construction & Plant Machinery
-  Agricultural Equipment & Storage Tanks
-  Commercial Transport & Fleet Operations
-  Standby and Prime Power Generators
-  Marine Vessels & Leisure Craft
-  Fuel Storage Depots & Distribution Points
-  Mining, Quarrying & Remote Operations

Whether stationary or mobile, Elais™ ensures ISO-clean diesel where it matters most—in the tank, before it hits the engine.

Installation – ELAIS Kleenfuel

Initial Setup

1. Unpack the Unit

Remove all packaging materials and dispose of them according to local recycling and waste disposal regulations.

2. Position the Unit

Place the ELAIS Kleenfuel on a solid, level surface. Adjust the **four feet** until the unit is stable and secure.

3. Remove Transit Caps

Detach the **yellow protective caps** from the inlet and outlet fittings.

Hose Connection

4. Connect Outlet Hose

Attach the **anti-static hose** to the **outlet fitting** and secure firmly by hand

5. Connect Inlet Hose

Connect the **standard hose** to the **inlet fitting** and tighten.

6. Route Outlet Hose to Target Tank/System

Position the outlet hose into the return point of the tank or system.

 **Hint:** For optimal tank circulation, return filtered fuel to the **opposite end** of where the suction hose draws from. Returning to the same point may only clean a localized area.

7. Attach Inlet Feed or Lift Lance

Connect the inlet hose to a feed line or insert the **optional lift lance** into the source tank.

Caution:

Do not connect to an engine supply line. If necessary, draw from a **return line** or use the **lift lance** for direct tank suction.

Electrical & Grounding Setup

8. Install Earthing Strap

- Attach one end to a metal foot of the unit
- Attach the other to a **bare metal conductive surface** nearby (e.g., frame or bodywork)

⚠ Caution:

Ensure metal-to-metal contact. Do not attach to painted or insulated surfaces.
Never ground the unit to a fuel tank, as this may risk ignition of vapours

9. Position Power Cable

Unwrap the power cable. Ensure the **power source is nearby** and that the cable is not under tension during operation.

10. Position Battery (if used)

If using a 12V **deep-cycle car battery**, place it on a stable surface near the unit. Ensure no nearby items can cause a short circuit.

11. Inspect Power Cable

Perform a quick **visual check**. If there's any damage, contact KLEENOIL for assistance.

Power Connection

12. Connect the **red clamp** to the **positive (+)** battery terminal.

13. Connect the **black clamp** to the **negative (-)** terminal.

14. Plug the **XT-60 connector** into the port on the front of the ELAIS Kleenfuel unit.

15. Verify all hoses and clamps are **secure and leak-free**.

System Start-Up

16. Press the **Power (I)** button on the control panel.

17. The **self-priming pump** will activate.

- Fluid flow should begin within **30–60 seconds**
- If not, the unit will **auto shut-off** after **1 minute 30 seconds**

⚠ Caution:

Do not place the unit more than 1.5m above the fuel level. This may prevent priming and cause pump damage.

18. After detecting steady fluid pressure for 10 seconds, the system will switch from **"Priming"** to **"Running"** mode.

- If the pump cycles more than **5 times** without confirming flow, it will **shut down** for protection.

19. Press the **Reset** ↺ button to restart if needed.

⚠ Caution:

Do not run dry for longer than **2 minutes**. This can permanently damage the pump and void warranty.

Operational Checks

20. Visually confirm fluid flow at the rock catcher housing.

21. Monitor the pressure gauge:

- New filter: ~0.5 bar
- Full filter: 2.5–3.0 bar (system will auto shut-off)

The pump is 2-speed, preset to high.

Use the “Low” button for reduced flow if needed.

Note: Running at low speed for 2 continuous hours will trigger auto shut-down to prevent overheating.

22. Inspect hoses and fittings for leaks. Tighten as needed.

23. Clean any spills & dispose of waste fuel in accordance with local regulations.

24. During operation, perform regular visual checks to confirm safe and effective system performance.



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