

RAJNI HYDRO TECH

An ISO 9001:2008 company

Portable Filtration Unit



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1 About this document

These document contains important information on the product details, ordering details, transport, commissioning, maintenance and simple troubleshooting of the Off-line filtration.

- Read these instructions completely and especially chapter "4 General safety instructions" before working with the Off-line filtration.

2 PRODUCT DESCRIPTION

Features

- Mobile and stationary system with own motor & pump unit. (Mobile option will be provided by default. If stationary system is required then please mention the same in clear text.)
- For temporary or permanent installation using offline flow.
- Relieve usage of main flow filters, extending life of expensive hydraulic system.
- Filtration of fresh and top-up fluids.
- Flushing of contaminated system or reservoirs.
- Upgrade cleanliness level of existing system.
- Low pressure drop.
- High efficient filter media.

Ordering details:

PF	15	6	3	2	2	*** (Special Feature in Text)
Porta Filter = PF						Outlet Line Hose Length (mtr.) = 2 = 0
Flow (lpm) = 15 = 32 = 70 = 109					Inlet Line Hose Length (mtr.) = 2 = 0	
Filter-1 rating = 10 μ = 6 μ				Filter-2 rating = 6 μ = 3 μ = 0 (No Filter)		

Technical data

Dimensions (width x height x depth)	~800 mm x ~1200 mm x ~900 mm
Product weight (maximum for 109 lpm)	~250 kg
Temperature range	+20 ... +70 °C
Relative humidity environment	max 90 % no condensation
Type of protection	IP 54
Hydraulic pump	Gear
Seal material	FKM
Admissible medium	Hydraulic and lubricating oil
Viscosity range	15 ... 1000 mm ² /s
Flow rate	As per model
Electrical connection	50Hz: 3~ 360-415V
	60Hz: 3~ 360-480V
	(Rated voltage according to DIN EN 60 034 / DIN IEC 34-1 + 10 %)
Power consumption(maximum for 109 lpm)	2.5 kW approx.
Length electric cable	5 m
Connection inlet/outlet	Quick Release coupling(dimension depends on model)
Length hose	~2 m (As per model “optional”)

3 Scope of delivery

The scope of delivery includes:

- 1 off-line filter system
- 1 suction hose, flexible, 2 m (Optional)
- 1 pressure hose, flexible, 2 m (Optional)

4 General safety instructions

The off-line filter system has been manufactured according to the accepted rules of current technology. There is, however, still a risk of personal injury or damage to property if the following safety instructions and warnings before instructions contained in these operating instructions are not observed.

- Read these instructions completely and thoroughly before working with the Off-line filtration.
- Keep these instructions in a location where they are accessible to all users at all times.
- Always include the operating instructions when you pass the Off-line filtration on to third parties.

4.1 Intended use

The off-line filter system is exclusively intended for the filtration of hydraulic fluids and lubricants with a viscosity of 10 - 200 mm²/s on the bypass.

- Observe the performance limits specified in the technical data.

Intended use includes having read and understood these instructions, especially the chapter "2 General safety instructions".

4.2 Improper use

Any use of the Off-line filtration other than described in chapter "2.1 Intended use" is considered as improper.

4.3 Qualification of personnel

Assembly, commissioning and operation, disassembly, service (including maintenance and repair) require basic mechanical, electric and hydraulic knowledge as well as familiarity with the associated technical terms. In order to ensure operational safety, these activities may only be carried out by corresponding experts or an instructed person under the direction and supervision of an expert.

Experts are those who can recognize potential hazards and apply the appropriate safety measures due to their professional training, knowledge and experience, as well as their understanding of the relevant conditions pertaining to the work to be undertaken. An expert must observe the relevant specific professional rules.

4.4 Adhere to the following instructions

4.4.1 General instructions

- Observe the regulations on accident prevention and environmental protection for the country where the product is used and at the workplace.
- Check the product for obvious defects, for example cracks in the housing or missing screws and cover caps, defective inspection glasses, defective display and keys as well as damaged cables.
- Do not change or convert the off-line filter system.
- Only use the product within the performance range provided in the technical data.

- Persons assembling, operating, disassembling or maintaining these products must not be under the influence of alcohol, other drugs or medications influencing the ability to react.
- The warranty only applies to the delivered configuration. The warranty expires if the product is incorrectly assembled, not used as intended and/or handled improperly.
- Do not expose the product to any mechanical loads under any circumstances. Never use the product as handle or step. Do not place any objects on top of it.

4.4.2 During assembly

- Make sure the system is de-pressurized and de-energized before assembling the product or connecting or pulling connectors. Protect the system against re-activation.
- Lay the cables and lines so that they cannot be damaged and no one can trip over them.
- Before commissioning, make sure that all the seals and caps of the plug-in connections are installed correctly and undamaged to ensure that fluids and contamination parts are prevented from penetrating the product.
- When assembling, provide for absolute cleanness in order to prevent welding beads or metal chips from getting into the hydraulic lines and causing product wear or malfunctions.

4.4.3 During commissioning

- Let the product acclimate itself for several hours before commissioning, as otherwise water may condense in the housing.
- Make sure that all electrical and hydraulic connections are either used or covered. Commission the product only if it is installed completely.

4.4.4 During operation

- In an emergency, in case of error or other irregularities switch the system off and protect it against re-activation.

4.4.5 During cleaning

- Cover all openings with the appropriate protective devices in order to prevent cleaning agents from penetrating the system.
- Never use solvents or aggressive detergents. Only clean the product using a slightly damp, lint-free cloth. Only use water and a mild cleaning agent, if necessary, to do so.
- Do not use a pressure washer for cleaning.

4.4.6 During maintenance and repair

- Perform the prescribed maintenance works at the intervals specified in the operating instructions.
- Make sure that no lines, connections or components are disconnected as long as the system is under pressure and voltage. Protect the system against re-activation.

4.4.7 Disposal

- Dispose of the product in accordance with the currently applicable national regulations in your country.
- Dispose of the hydraulic fluid in accordance with the currently applicable national regulations in your country.
- Dispose of hydraulic fluid residues according to the applicable safety data sheets for hydraulic fluids.

4.5 Obligations of the operator

The operator of the off-line filter system must provide personnel training on the following topics and on a regular basis:

- Observation and use of the operating instructions and the legal regulations
- Intended operation of the Off-line filtration
- Observation of the instructions from the factory security office as well as the operator's operating instructions
- How to behave in case of emergency

4.6 Safety equipment

4.6.1 Personal protection equipment

The operator must provide personal safety equipment (e.g. gloves, safety shoes, safety goggles, overall, etc.).

5 Transport and storage

5.1 Transporting the off-line filter system

The off-line filter system must be transported horizontally as there is always a certain amount of oil within the filter unit (in the filter, in the pump as well as in the hoses) that will leak in case of any other transport and lead to pollution.

- Please observe the information in chapter "2 General safety instructions".

5.2 Storing Off-line filtration

The off-line filter system should be stored in a closed room in order to protect it against humidity and condensate formation.

Risk of chemical reaction!

DANGER



Chemical substances in the immediate vicinity of the off-line filter system may react and lead to destruction of the system and injuries of persons staying in the immediate vicinity of the system.

- It is forbidden to store the system in the immediate vicinity of chemically active substances like acids, bases, salts, organic solvents and rechargeable batteries.
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The ambient temperature during storage of the off-line filter system should lie between +5 °C and +30 °C with an air humidity of maximally 80 %. Before storage for a period of more than 6 months, the system should be filled with oil in order to preserve it as protection against rust formation.

6 Commissioning

CAUTION!

Missing seals and caps will lead to non-compliance with protection class IP 54!
Liquids and contamination parts may penetrate and damage the product.

- Before commissioning, ensure that all seals and plugs of the plug-in connection are leak-proof.

CAUTION!**Product damage!**

Polluted hydraulic fluid could result in wear and malfunctions. In particular, contamination parts like e.g., welding beads or metal chips in the suction lines may damage the off-line filter system.

- When commissioning you should ensure absolute cleanliness.

6.1 First commissioning

6.1.1 Switch on the hydraulic and electric supply

6.1.2 Commissioning the off-line filter system

Proceed as follows to commission the off-line filter system:

1. Switch on the 415 V AC supply voltage at the control box.

7 Maintenance and repair

7.1 Cleaning and care

CAUTION!



Penetrating dirt and penetrating liquids will cause faults!

Safe function of the off-line filter system is no longer ensured.

- Always provide for utmost cleanness when working at the hydraulic system.
- Do not use a pressure washer.

CAUTION!



Damage to the surface from solvents and aggressive cleaning agents!

Aggressive detergents may damage the inspection glasses and plastic parts of the Off-line filtration and let them age faster.

- Never use solvents or aggressive detergents.
- Do not use pressure washers for cleaning.

CAUTION!



Damage to the hydraulic system and seals!

The water pressure of a pressure washer can damage the hydraulic system and seals of the off-line filter system. The water displaces the oil from the hydraulic system and seals.

- Do not use pressure washers for cleaning.
- Cover all openings with appropriate protective caps.
- Check that all seals and caps of the plug-in connections are firmly fitted so that no humidity can penetrate the Off-line filtration.
- Only clean the Off-line filtration using a damp, lint-free cloth. Only use water and a mild cleaning agent, if necessary, to do so.

7.2 Maintenance

If used as intended, the off-line filter system is maintenance-free.

7.3 Repair

We offers a wide range of repair services for the off-line filter system.

- Only use genuine spare parts for repairing the off-line filter system.
- Tested and pre-assembled original assemblies allow for successful repair requiring only little time.

8 Disposal

8.1 Environmental protection

Careless disposal of the Off-line filtration and the hydraulic fluid could lead to environmental pollution.

- Thus, dispose of the Off-line filtration and the hydraulic fluid in accordance with the currently applicable national regulations in your country.
- Dispose of hydraulic fluid residues according to the applicable safety data sheets for these hydraulic fluids.