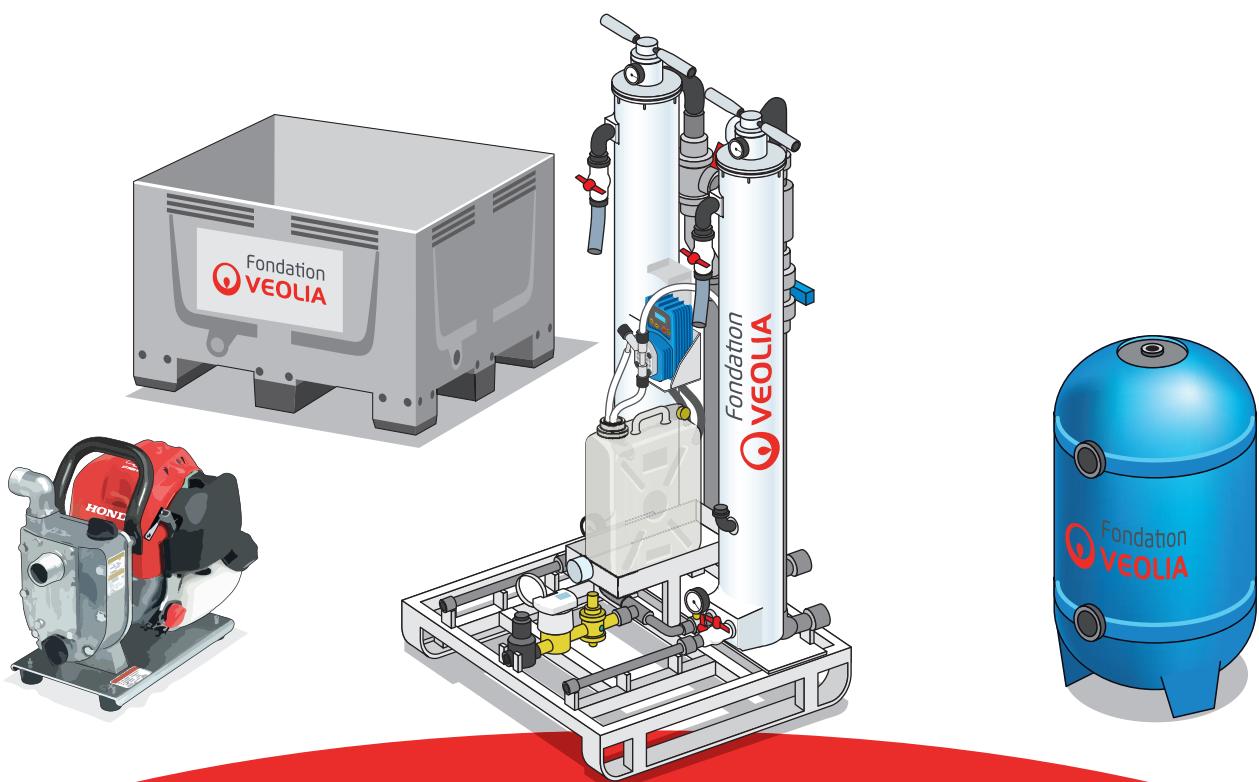




Aquaforce 2000

Mobile water treatment unit
for humanitarian emergencies

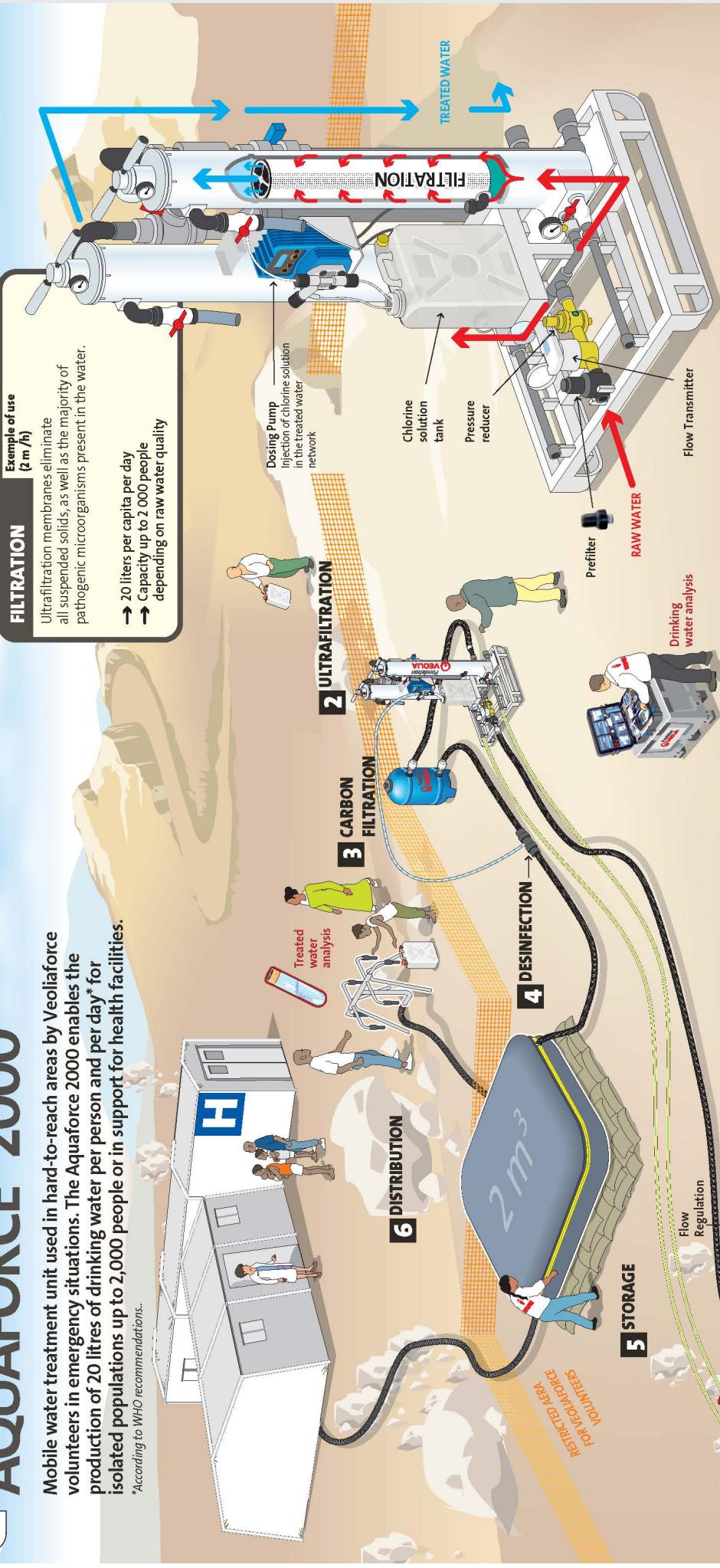


User manual

AQUAFORCE 2000

Mobile water treatment unit used in hard-to-reach areas by Veoliaforce volunteers in emergency situations. The Aquaforce 2000 enables the production of 20 litres of drinking water per person and per day* for isolated populations up to 2,000 people or in support for health facilities.

*According to WHO recommendations.



Foundation
OVEOLIA

Table of contents

Installation and operation

Installation of the pump	p.4
Launching the strainer into the water	p.4
Filling of engine consumables.....	p.5
Connection pump/filtration module.....	p.6
Connection of purge pipe to the filtration module <small>lorem ipsum</small>	p.6
Valve position prior to any start	p.7
First start	p.8
Checking the integrity of the membranes	p.11
Connection filtration module/carbon filter for 1st cleaning	p.12
Connection filtration module / carbon filter in production mode	p.13
Final complete assembly	p.14

Chemistry

Impact of chlorine on water potability.....	p.16
How to chlorinate water after the carbon filter	p.16
Chlorine stock solution in the laboratory.....	p.17
Chlorine demand	p.20
The dosing pump	p.24
Priming the dosing pump	p.25
Calculation of the volume to be injected by the dosing pump	p.28
Preparation of the 10 L stock solution.....	p.30
Starting the dosing pump	p.31
Start of production	p.32

Operation and monitoring

Operation and monitoring	p.35
Chemical washing	p.39

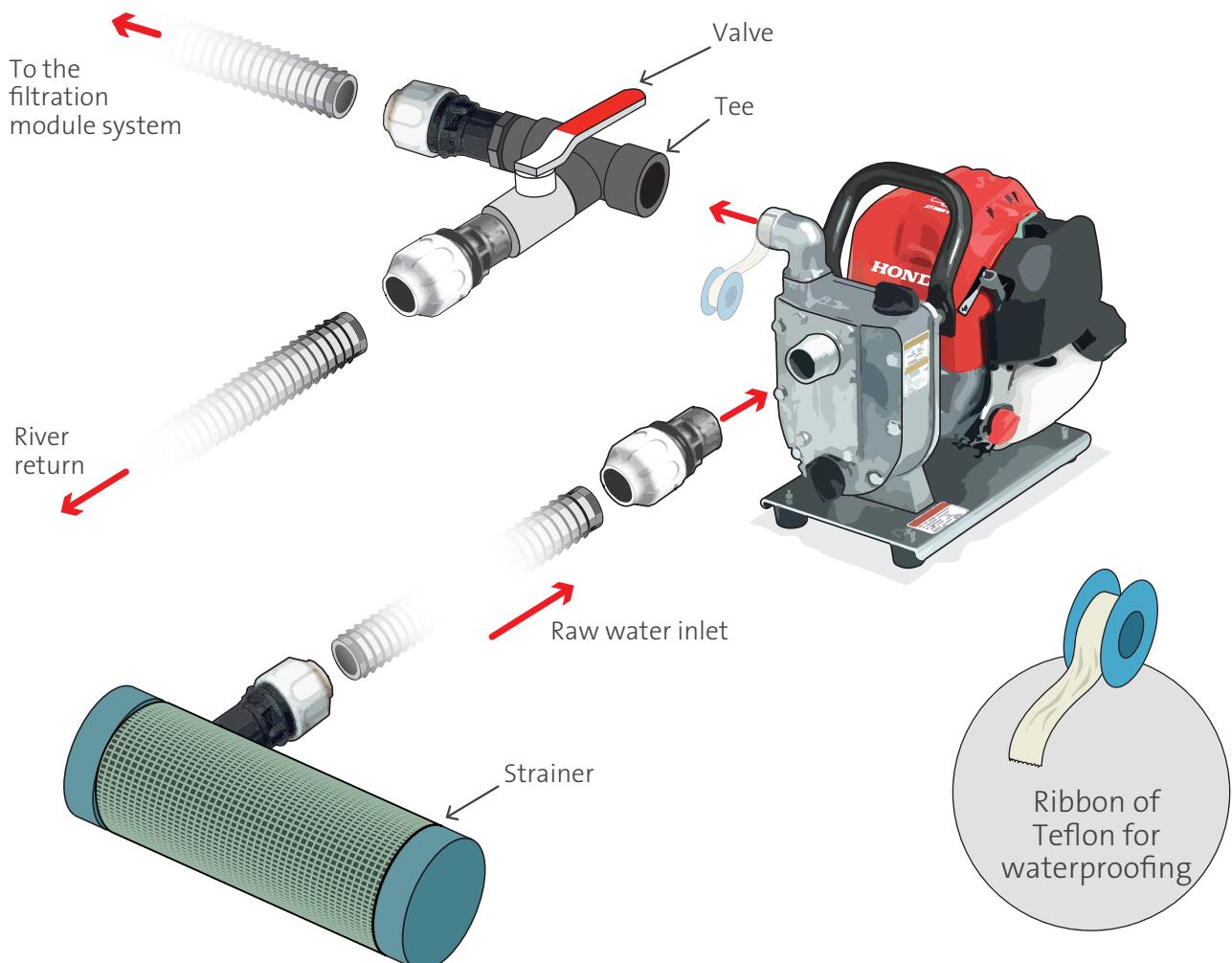
Appendices

Turbidity measurement	p.40
Trouble shooting	p.41
Reminder of the SPHERE recommendations	p.42
Selection of the production site	p.43
Breaking capacity	p.44

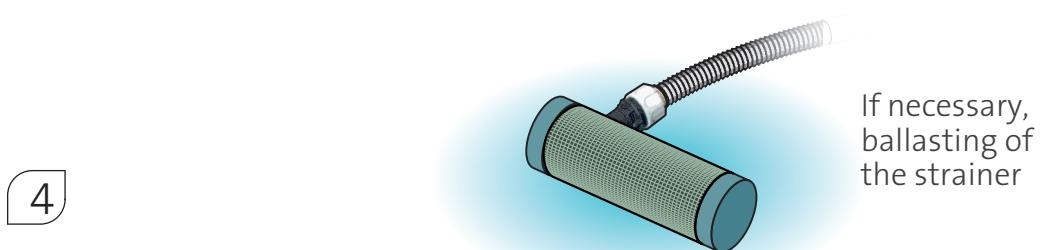
AQUAFORCE 2000 is a drinking water production kit designed for use in humanitarian emergency or post-crisis contexts. It operates through an ultrafiltration process. Membrane filtration removes all suspended solids and most pathogenic microorganisms from the water. After filtration, the injection of a chlorinated solution makes it possible to secure the distribution of water. The water thus distributed complies with SPHERE standards and WHO standards.

The mobile treatment unit can treat a wide range of raw water, but cannot treat salt or brackish water. The production rate varies according to the turbidity of the water, with a maximum of 2m³/h. The module is easily transportable and can be used to reach dispersed populations or to support emergency hospital structures (weight: 270 kg; volume: 2.5 m³). The equipment can be deployed by two people in two hours and only one person is required to operate and maintain it.

1 INSTALLATION OF THE PUMP



2 LAUNCHING THE STRAINER INTO THE WATER



3

FILLING OF ENGINE CONSUMABLES

- 1** Fill with oil and fuel

Fuel tank cap

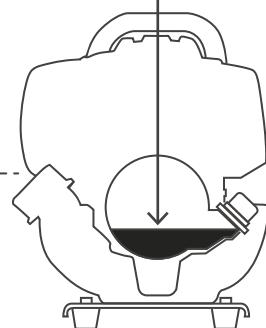
Oil tank cap

OIL SPECIFICATIONS: 15W40

BE CAREFUL!

REFUEL FLAT
DO NOT TILT THE PUMP

Maximum level of oil



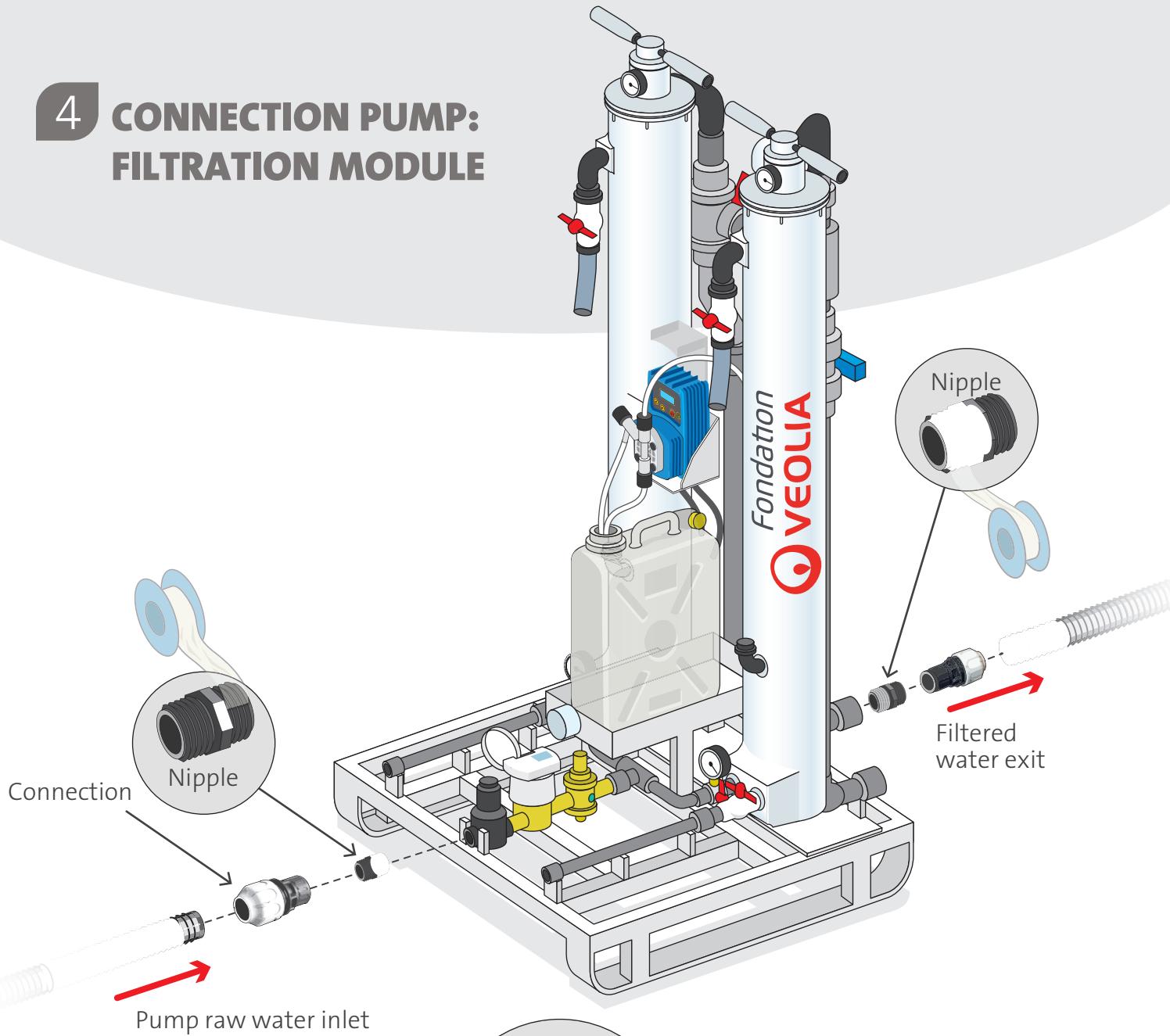
- 2** Fill the body of the pump with water

Water tank

BE CAREFUL!

OPERATION WITHOUT OIL & WATER
► MAY DAMAGE THE PUMP

4 CONNECTION PUMP: FILTRATION MODULE



5 CONNECTION OF PURGE PIPE TO THE FILTRATION MODULE

6

