

PAUL[®]: the Waterbackpack for emergencies



The
WaterBackpack
Company GmbH
www.waterbackpack.org

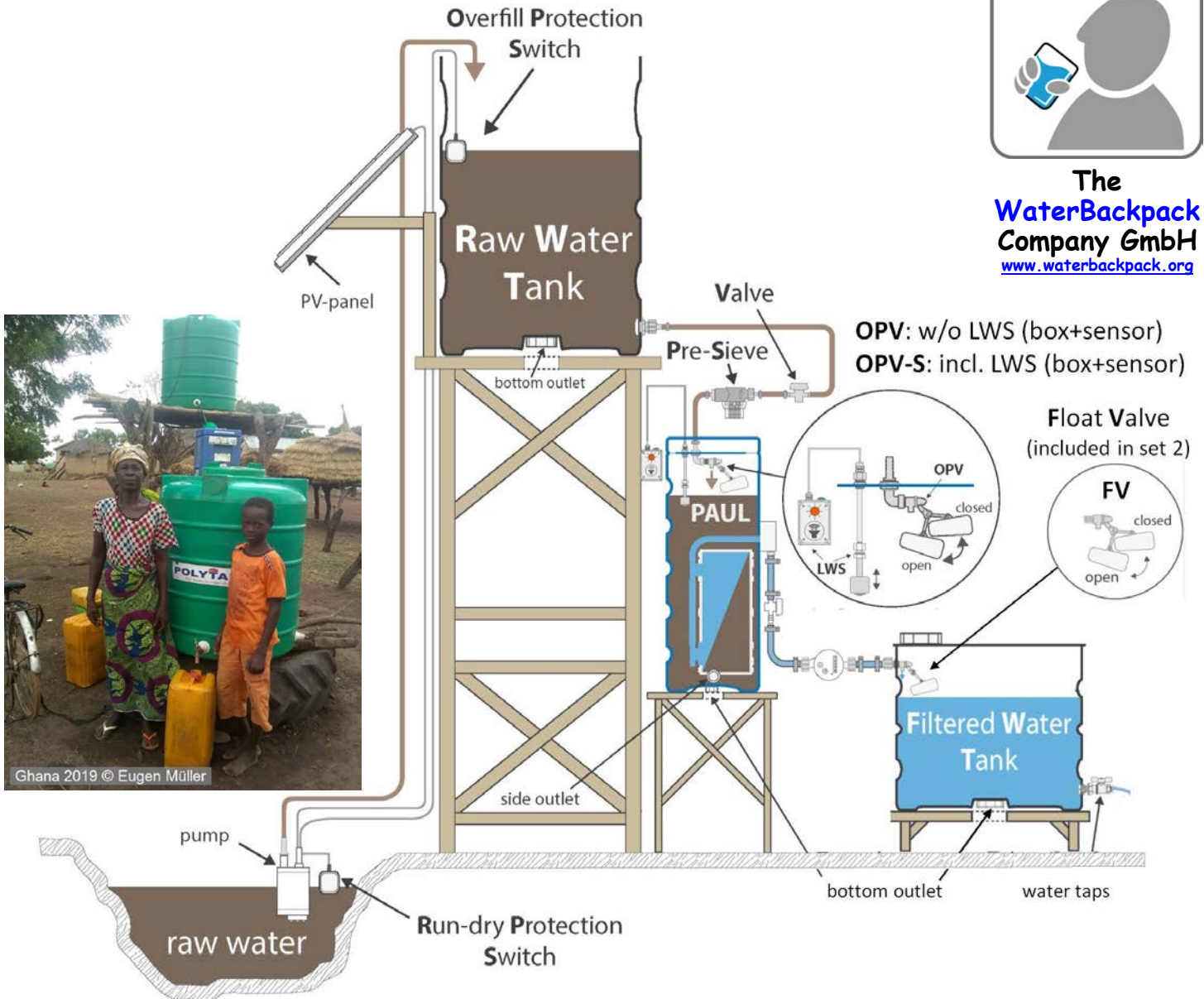
PAUL[®] standard unit – for humanitarian use 1,200.00 €
40 x 40 x 106 cm 23 kg min 1,200 Liter per day

All prices **excl. VAT** and **EXW Kassel/Germany**
All prices are valid starting **01.06.2022** and are subject to change without prior notice

PAUL[®] station: permanent water supply



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Ghana 2019 © Eugen Müller

Parts and prices – humanitarian use

PAUL [®] station	minimum	essential
PAUL standard unit	1,200 €	
OPV Overfilling Prevention Valve – please see note!	100 €	
OPV-S OPV with sensor+LWS box – please see note!	280 €	
Set 1: connection RWT to PAUL (incl. RWT connector, sieve, valve, hose etc.)		110 €
Set 2: connection PAUL to FWT (incl. flowmeter, float valve, hose etc.)		120 €
Set 3: side outlet with transparent hose		20 €
Set 4: outlet for FWT		50 €
	1,300 €/1,480 €	300 €

note: either **OPV** or **OPV-S** is necessary for permanent supply!

Also available (first, please check local conditions):		
OPS Overfilling Prevention Switch for the RWT		40 €
RPS Run-dry Prevention Switch for the pump		40 €

All prices **excl. VAT** and **EXW Kassel/Germany**

All prices are valid starting **01.11.2022** and are subject to change without prior notice
We do **not** offer pumps, hose from water supply to RWT, tanks (RWT, FWT) and stands,
as these items can best be provided locally

PAUL® / PAUL® station order form

Herewith I order the following:

Quantity	Item	unit price	total
___	pcs PAUL® standard unit including printed manual in <input type="checkbox"/> English <input type="checkbox"/> French	1,200.00 €	_____ €
___	pcs OPV (to set up a PAUL® station, either OPV	100.00 €	_____ €
___	pcs OPV-S or OPV-S is necessary)	280.00 €	_____ €
___	pcs Set 1: Connection from RWT to PAUL® incl. 1" RWT connector with valve, sieve, hose and parts	110.00 €	_____ €
___	pcs Set 2: Connection from PAUL® to FWT incl. flow meter float valve for FWT, hose and parts	120.00 €	_____ €
___	pcs Set 3: side outlet with transparent hose and parts	20.00 €	_____ €
___	pcs Set 4: outlet for FWT including FWT connector and valve, 1" diameter	50.00 €	_____ €
Depending upon local circumstances, also these items can be helpful:			
___	pcs OPS: Overfilling Prevention Switch for RWT	40.00 €	_____ €
___	pcs RPS: Run-dry Prevention Switch for the pump	40.00 €	_____ €
Also available:			
___	pcs Replacement membrane module membrane area <input type="checkbox"/> 10 m ² (standard type) <input type="checkbox"/> 6 m ² (in case of extreme solids)	600.00 €	_____ €

All prices **excl. VAT** and **EXW Kassel/Germany** total amount _____ €

Country of destination: _____

City/GPS location of destination: _____

Address invoice

Address delivery

_____	_____
_____	_____
_____	_____

Place and date _____

Signature _____

Important! With my signature I also assure that

☺ All goods ordered herewith are strictly for **humanitarian use** which I will **testify appropriately**

☺ I will follow the notes as outlaid on the next page and **submit feedback** as soon as possible to frechen@uni-kassel.de

1. For the benefit of all **PAUL** users, I collect **flow data**. There are two ways to measure:
 - a. If you operate a PAUL station with water meter, then the procedure is described in the manual in chapter 6.2.2.
Below is attached the form with the help of which this can be done.
The manual asks for a weekly measurement, which I think would be wonderful, but even monthly measurements would be a great help to all users of **PAUL**, so my strong request is that such results be sent to me.
 - b. For PAUL without water meter: Fill PAUL completely, filter into a bucket and measure the time necessary to fill that bucket. Then please let me know date&time, the volume of the bucket filled, the time necessary, the location and the PAUL serial number stamped on the top cover.
 - c. It would be very helpful if you would take such measurements periodically, preferably right at the beginning and then at (ever increasing) intervals....,
2. I would also be very grateful for text and picture material, in order to also gain info on the use of **PAUL** and its installation/operation environment. Please give me your consent to use this material (pls indicate the appropriate copyright text, e.g. date&time, location author....).
3. Before setting up a PAUL station, think about the following advices and see the assembly video on www.waterbackpack.org:
 - a. In order to mount the hose from the Raw Water Tank RWT to the hose connection on the OPV and to be able to work on the top of **PAUL** if necessary, I recommend to leave a headspace above **PAUL**. The more you provide, the easier, see also next point!.
 - b. The OPV is hinged on one side. The purpose of this is to be able to fill in water manually even when **PAUL** is permanently installed, either with a bucket (headspace needed, see previous point) or via a hose etc.. The purpose is described in chapter 6.4.2 of the manual. Then, of course, temporarily shut off the inflow from the RWT with the valve in the hose (operating point!).
 - c. The side drain (seen from the front) at the bottom left of **PAUL** (see Manual, fig. 12) is an operating point and thus should be easily accessible both for daily water level checks and for weekly draining of the sediment, see Manual Chap. 6.1.1 and 6.2.1.
 - d. The strainer in the hose from the RWT to the OPV and the valve there are also operating points. It is recommended to arrange both in such a way that easy access is ensured (e.g. close to the side drain).
4. The rule for **PAUL** (also within a **PAUL** station arrangement) is that the membrane must not dry out completely. However, a break of a few days is not harmful! See next point!
5. **Note:** when stopping filtration, always close valve after PAUL first to ensure that **PAUL** still at least is halfway filled with water!
6. If any issues arise with your **PAUL/PAUL station**: we try our best to help, but you have to provide reasonable material: as many photos as possible of all aspects of installation, high quality photo of filtered water vs. raw water in glass, description of plant operation before the event, measurement results (see point 1 above!), any analytical results etc.etc.

Weekly Maximum Filtration Test (see footnote / Manual Chapter 6.2.2)

Location: _____

PAUL S/N: _____ please return data to frechen@uni-kassel.de

Date	Start test Time hh:mm:ss	Count	Date	End test Time hh:mm:ss	Count	Remarks signature
15.02.19	11:02:00	12.214	15.02.19	11:17:00	12.242	this is a sample
	__:__:__			__:__:__		
	__:__:__			__:__:__		
	__:__:__			__:__:__		
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1. Assure that PAUL is filled up and enough water is in the RWT.
2. Assure that the effluent of PAUL is open. If FWT is connected, float valve in the FWT must be fully open.
3. Note all digits of the water meter, including the three red ones, see Figure 16, and the exact date and time
4. Let PAUL filter at least 10 minutes (or more) and then again note all digits and the exact date and time