

# INSTALLATION & ASSEMBLY GUIDE

## REWATEC

Neo Rainwater Harvesting













### **Installation & Assembly Guide**

### **Rewatec NEO**

Rainwater Harvesting 1,500L – 10,000L Flat Tank

### **Manual Version DORW5001**

Created On: 15 March 2022 Rev 2



Installers: To Safeguard Warranty Please
Ensure You Are Using The Latest
Installation Manual





### **Customer Checklist**

**Complete Installation Record** Page 4 **Read Important Customer** Page 5 Information **Register Your Warranty** Page 6 See Maintenance Schedule Page 7-8 **Familiarise Yourself With This** Page 9> Manual





### **Installation Record**

Please record details of your NEO tank installation here and keep this document in a safe place.

| Unit Installed (Pleas | e Tick)                       |                                                                                                                                                                              |
|-----------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| □ NEO 1500            | □ NEO 5000                    |                                                                                                                                                                              |
| □ NEO 3000            | □ NEO 7100                    |                                                                                                                                                                              |
| Serial Number:        |                               |                                                                                                                                                                              |
| Commissioning Date:   |                               |                                                                                                                                                                              |
|                       | on & Commissioning<br>Company | Service Company                                                                                                                                                              |
|                       |                               | Name:                                                                                                                                                                        |
| Contact:              |                               | Contact:  If you require assistance finding a service company, please contact Premier Tech. Your warranty is invalidated if you do not keep to a regular servicing schedule. |
| PREMIER               |                               | •                                                                                                                                                                            |
| PT Water a            | nd Environment IIK            |                                                                                                                                                                              |

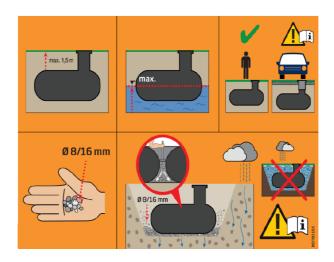
+44 (0) 191 587 8650

sales.ptwe.uk@premiertech.com Premiertechaqua.com/en-gb

### ▲ Important Customer Information

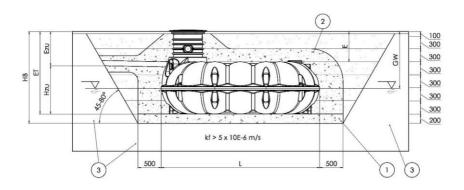
The information listed in this document must be observed at all times. Failure to do so will void any warranty. Separate installation instructions are supplied for all Premier Tech Aquarelated accessory items. You can download missing guides at www.premiertechaqua.de or request them from Premier Tech Aqua. The components must be checked for damage while unloading/receiving the goods.

Overview of the MOST IMPORTANT information for installation and assembly.



- Permitted earth covering E (traversable by foot): 0.20 m to 1.50 m over tank shoulder
- Ground water level GW: Maximum up to tank equator (including after heavy rain)
- The superstructure and permissible earth covering changes for areas that are driven on (see chapter 3).

- Use suitable filling material for the bedding ① and tank surround
   ②. Recommendation: Round-grain gravel with max. grain size of 8/16mm (for details, see chapter 2.3)
- In-situ base ③ must be sufficiently water-permeable (kf value > 5 x 10-6m/s). Otherwise, there is a temporary risk of high base water levels in the event of rain ("bathtub effect").
- Otherwise, use ring drainage or the heavy-duty NEO X-Line tank design.
- Before filling the material, half-fill the tank with water and manually compact the material in 300 mm layers. Insert filling material even in areas that are difficult to access (recesses, the underside of the tank). Do not sluice.
- After the installation, the tank and shaft systems must be completely surrounded by a layer of at least 200 to 300 mm of compacted filling material (round-grain gravel 8/16mm) and free of hollows.



#### **IMPORTANT General Information**

#### **Safety Instructions**

The applicable accident prevention provisions as per BGV (German trade association provisions) C22 must be observed during all work. While accessing or walking upon the tank, a second person is required for safety.

The applicable regulations and standards must be taken into account during all installation, assembly, maintenance and repair work, and so on.

The tank cover must be kept sealed at all times (see chapter 5). When working on the tank, the open manhole must be highlighted and cordoned off.

#### **Mandatory Labelling**

All service water pipes and tapping points must be labelled with the words "Do Not Drink/Not Drinking Water" in accordance with DIN 1988 (DIN 1988 part 2, section 3.3.2.). All service water taps with valves must be installed with child safety guards.

#### Master data for your NEO flat tank

Tip: remove the label from the tank and attach it here.

Note the most important specifications for your tank. With these specifications, the PREMIER TECH AQUA service team can provide you with quick assistance at any time. These specifications are required if you want to assert warranty claims.

PTA

Substitute of the label of



## MIER WARRANTY

Thank you for purchasing a Premier Tech product.

To activate your warranty complete the form below to receive your warranty certificate by email:

premiertechaqua.com/en-gb/warranty-activation



- Your NEO is supplied with a 35-year Parts and Workmanship guarantee.
- This warranty is dependent upon the tank being installed, operated and maintained in accordance with this Installation, Operation and Maintenance manual.
- Proof of correct installation and maintenance including purchase of serviceable parts <u>MUST</u> be retained, as these will be required in the event of any warranty claim.

Failure to comply with the above Terms and Conditions will invalidate the warranty.

Premier Tech Water & Environment Ltd accepts no liability for any damage or loss, including consequential loss, caused by the failure of any equipment supplied.





### Rewatec NEO Maintenance Schedule

Details of servicing & maintenance requirements are located within this manual. Please use this page to record your tanks services and maintenance.

Your warranty is invalidated if you do not keep to a regular servicing schedule.

| 6 Month Check<br>Date:               | 1 <sup>st</sup> Annual Service<br>Date: |
|--------------------------------------|-----------------------------------------|
| Servicing Company:                   | Servicing Company:                      |
| Notes:                               | Notes:                                  |
|                                      |                                         |
| 2 <sup>nd</sup> Annual Service Date: | 3 <sup>rd</sup> Annual Service Date:    |
| Servicing Company:                   | Servicing Company:                      |
| Notes:                               | Notes:                                  |
|                                      |                                         |
| 4 <sup>th</sup> Annual Service       | 5 <sup>th</sup> Annual Service          |
| Date:                                | Date:                                   |
| Servicing Company:                   | Servicing Company:                      |
| Notes:                               | Notes:                                  |
|                                      | -t                                      |
| 6 <sup>th</sup> Annual Service Date: | <b>7th Annual Service</b> Date:         |
| Servicing Company:                   | Servicing Company:                      |
| Notes:                               | Notes:                                  |
|                                      |                                         |





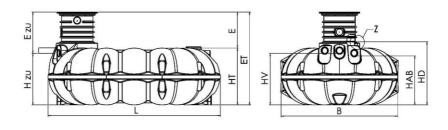
## **Rewatec NEO Maintenance Schedule**

| 8 <sup>th</sup> Annual Service                                           | 9 <sup>th</sup> Annual Service                                           |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Date:                                                                    | Date:                                                                    |
|                                                                          |                                                                          |
| Servicing Company:                                                       | Servicing Company:                                                       |
|                                                                          |                                                                          |
| Notes:                                                                   | Notes:                                                                   |
|                                                                          |                                                                          |
|                                                                          |                                                                          |
|                                                                          |                                                                          |
|                                                                          |                                                                          |
| 10th Annual Service                                                      | 11th Annual Service                                                      |
| Date:                                                                    | Date:                                                                    |
|                                                                          |                                                                          |
| Servicing Company:                                                       | Servicing Company:                                                       |
|                                                                          | . ,                                                                      |
| Notes:                                                                   | Notes:                                                                   |
|                                                                          |                                                                          |
|                                                                          |                                                                          |
|                                                                          |                                                                          |
|                                                                          |                                                                          |
|                                                                          |                                                                          |
| 12th Annual Service                                                      | 13th Annual Service                                                      |
| 12 <sup>th</sup> Annual Service                                          | 13 <sup>th</sup> Annual Service                                          |
| 12 <sup>th</sup> Annual Service Date:                                    | 13 <sup>th</sup> Annual Service Date:                                    |
| Date:                                                                    | Date:                                                                    |
|                                                                          |                                                                          |
| Date:                                                                    | Date:                                                                    |
| Date: Servicing Company:                                                 | Date: Servicing Company:                                                 |
| Date: Servicing Company:                                                 | Date: Servicing Company:                                                 |
| Date: Servicing Company:                                                 | Date: Servicing Company:                                                 |
| Date: Servicing Company:                                                 | Date: Servicing Company:                                                 |
| Date: Servicing Company: Notes:                                          | Date: Servicing Company: Notes:                                          |
| Date: Servicing Company: Notes:  14 <sup>th</sup> Annual Service         | Date:  Servicing Company:  Notes:  15 <sup>th</sup> Annual Service       |
| Date: Servicing Company: Notes:                                          | Date: Servicing Company: Notes:                                          |
| Date:  Servicing Company:  Notes:  14 <sup>th</sup> Annual Service Date: | Date:  Servicing Company:  Notes:  15 <sup>th</sup> Annual Service Date: |
| Date: Servicing Company: Notes:  14 <sup>th</sup> Annual Service         | Date:  Servicing Company:  Notes:  15 <sup>th</sup> Annual Service       |
| Date:  Servicing Company:  Notes:  14 <sup>th</sup> Annual Service Date: | Date:  Servicing Company:  Notes:  15 <sup>th</sup> Annual Service Date: |

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### 1. NEO Technical Data



DETAIL Z MABSTAB 1:5



ET Installation depth
E Earth covering over tank shoulder
Ezu Lower edge of inlet to ground surface level
Hzu Lower edge of inlet to tank bottom
L Tank length
B Tank width
HT Height of tank body
HV Height of supply line
HD Height of tank up to the upper edge of the tank dome

Installation dimensions of NEO tanks without FI filter shaft

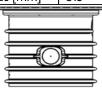
| Tanks    | NEO 1500 | NEO 3000 | NEO 5000 | NEO 8000 | NEO 10000 |
|----------|----------|----------|----------|----------|-----------|
| Weight   | 50 kg    | 110 kg   | 170 kg   | 280 kg   | 340 kg    |
| L [mm]   | 1920     | 2340     | 3400     | 4420     | 5420      |
| B [mm]   | 1920     | 2340     | 2320     | 2300     | 2300      |
| HT [mm]  | 810      | 1050     | 1120     | 1260     | 1260      |
| Hzu [mm] | 575      | 960      | 1005     | 1185     | 1185      |
| HD [mm]  | 810      | 1180     | 1245     | 1415     | 1415      |
| HV [mm]  | 575      | 960      | 1005     | 1185     | 1185      |
| HAR [mm] | 535      | 910      | 955      | 1145     | 1145      |

HAB Outlet/overflow height

| With VS20 shaft extension                     |     |      |   |      |  |      |  |      |  |  |  |
|-----------------------------------------------|-----|------|---|------|--|------|--|------|--|--|--|
| NEO 1500 NEO 3000 NEO 5000 NEO 8000 NEO 10000 |     |      |   |      |  |      |  |      |  |  |  |
| E [mm]                                        | 180 | 310  |   | 305  |  | 335  |  | 335  |  |  |  |
| ET [mm]                                       | 990 | 1360 | ) | 1425 |  | 1595 |  | 1595 |  |  |  |
| Ezu [mm]                                      | 415 | 400  |   | 420  |  | 410  |  | 410  |  |  |  |



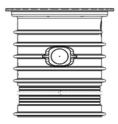
| With VS60 sl                                  | With VS60 shaft extension |      |   |      |  |      |  |      |  |  |  |  |
|-----------------------------------------------|---------------------------|------|---|------|--|------|--|------|--|--|--|--|
| NEO 1500 NEO 3000 NEO 5000 NEO 8000 NEO 10000 |                           |      |   |      |  |      |  |      |  |  |  |  |
| E [mm]                                        | 580                       | 710  |   | 705  |  | 735  |  | 735  |  |  |  |  |
| ET [mm]                                       | 1390                      | 1760 | ) | 1825 |  | 1995 |  | 1995 |  |  |  |  |
| Ezu [mm]                                      | 815                       | 800  |   | 820  |  | 810  |  | 810  |  |  |  |  |



| With adapter ring and VS20 shaft extension (min. to max.) |            |       |        |          |     |            |   |            |  |  |
|-----------------------------------------------------------|------------|-------|--------|----------|-----|------------|---|------------|--|--|
| NEO 1500 NEO 3000 NEO 5000 NEO 8000 NEO 10000             |            |       |        |          |     |            |   |            |  |  |
| E [mm]                                                    | 590 to 705 | 700   | to 815 | 695 to   | 810 | 725 to 840 | ) | 725 to 840 |  |  |
| ET [mm]                                                   | 1400 to    | 1750  | to     | 1815 to  |     | 1985 to    |   | 1985 to    |  |  |
|                                                           | 1515       | 1865  | ,      | 1930     |     | 2100       |   | 2100       |  |  |
| Ezu [mm]                                                  | 825 to 940 | 790 · | to 905 | 810 to 9 | 925 | 800 to 915 | 5 | 800 to 915 |  |  |
|                                                           |            |       |        |          |     |            |   |            |  |  |



| With adapte | With adapter ring and VS60 shaft extension (min. to max.) |                                      |         |               |  |             |   |             |  |  |  |
|-------------|-----------------------------------------------------------|--------------------------------------|---------|---------------|--|-------------|---|-------------|--|--|--|
| NEO 1500    | NEO 3000                                                  | NEO 3000 NEO 5000 NEO 8000 NEO 10000 |         |               |  |             |   |             |  |  |  |
| E [mm]      | 670 to 1105                                               | 780 ·                                | to 1215 | 775 to 1210   |  | 805 to      |   | 805 to      |  |  |  |
|             |                                                           |                                      |         |               |  | 1240        |   | 1240        |  |  |  |
| ET [mm]     | 1480 to                                                   | 1830                                 | ) to    | 1895 to       |  | 2065 to     |   | 2065 to     |  |  |  |
|             | 1915                                                      | 2265                                 | 5       | 2330          |  | 2500        |   | 2500        |  |  |  |
| Ezu [mm]    | 905 to 1340                                               | 870 ·                                | to 1305 | 5 890 to 1325 |  | 880 to 1315 | 5 | 880 to 1315 |  |  |  |

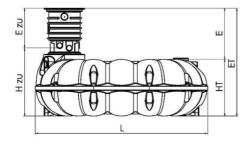


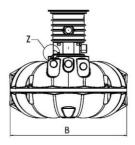
The adapter ring and VC60 shaft extension can be cut for intermediate dimensions. Please follow the corresponding instructions.

You can find the dimensions with the filter shaft on the next page

### 2. NEO Technical Data With Filter Shaft

#### 2.1 Installation dimensions







ET Installation depth

E Earth covering over tank shoulder

Ezu Lower edge of inlet to ground surface level

Hzu Lower edge of inlet to tank bottom

L Tank length

B Tank width

HT Height of tank body

HD Height of tank up to the upper edge of the tank dome

HV Height of supply line; see drawing on page 8

HAB Outlet/overflow height, dependent on FI1/FI2 filter shaft

See table on page 8

#### Installation dimensions of NEO tanks With FI1/FI2 filter shaft

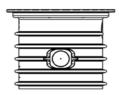
| Tanks                 | NEO 1500 | NEO 3000 | NEO 5000 | NEO 8000 | NEO<br>10000 |
|-----------------------|----------|----------|----------|----------|--------------|
| Weight                | 50 kg    | 110 kg   | 170 kg   | 280 kg   | 340 kg       |
| L[mm]                 | 1920     | 2340     | 3400     | 4420     | 5420         |
| B [mm]                | 1920     | 2340     | 2320     | 2300     | 2300         |
| HT [mm]               | 810      | 1050     | 1120     | 1260     | 1260         |
| Hzu [mm]              | 910      | 1280     | 1345     | 1515     | 1515         |
| HD [mm]               | 810      | 1180     | 1245     | 1415     | 1415         |
| HV [mm]               | 910      | 1280     | 1345     | 1515     | 1515         |
| HAB with Fl-<br>1[mm] | 535      | 910      | 955      | 1145     | 1145         |
| HAB with FI-<br>2[mm] | 860      | 1230     | 1295     | 1465     | 1465         |



| With VS20 sl                                  | With VS20 shaft extension + filter shaft |      |   |      |  |      |  |      |  |  |  |  |
|-----------------------------------------------|------------------------------------------|------|---|------|--|------|--|------|--|--|--|--|
| NEO 1500 NEO 3000 NEO 5000 NEO 8000 NEO 10000 |                                          |      |   |      |  |      |  |      |  |  |  |  |
| E [mm]                                        | 475                                      | 605  |   | 600  |  | 630  |  | 630  |  |  |  |  |
| ET [mm]                                       | 1285                                     | 1655 | ı | 1720 |  | 1890 |  | 1890 |  |  |  |  |
| Ezu [mm]                                      | 375                                      | 375  |   | 375  |  | 375  |  | 375  |  |  |  |  |



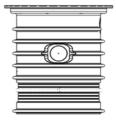
| With VS60 shaft extension + filter shaft      |      |      |   |      |  |      |  |      |  |  |  |
|-----------------------------------------------|------|------|---|------|--|------|--|------|--|--|--|
| NEO 1500 NEO 3000 NEO 5000 NEO 8000 NEO 10000 |      |      |   |      |  |      |  |      |  |  |  |
| E [mm]                                        | 875  | 1005 | 5 | 1000 |  | 1030 |  | 1030 |  |  |  |
| ET [mm]                                       | 1685 | 2055 | 5 | 2120 |  | 2290 |  | 2290 |  |  |  |
| Ezu [mm]                                      | 775  | 775  |   | 775  |  | 775  |  | 775  |  |  |  |



| With adapter ring, VS20 shaft extension + filter shaft (min. to max.) |             |          |        |          |     |            |   |            |
|-----------------------------------------------------------------------|-------------|----------|--------|----------|-----|------------|---|------------|
| NEO 1500                                                              | NEO 3000    | NEO 3000 |        | 5000 NEC |     | 0008       | Z | EO 10000   |
| E [mm]                                                                | 900 to 1015 | 1030     | ) to   | 1025 to  |     | 1055 to    |   | 1055 to    |
|                                                                       |             | 1145     |        | 1140     |     | 1170       |   | 1170       |
| ET [mm]                                                               | 1710 to     | 2080     | O to   | 2145 to  |     | 2315 to    |   | 2315 to    |
|                                                                       | 1825        | 2195     |        | 2260     |     | 2430       |   | 2430       |
| Ezu [mm]                                                              | 800 to 915  | 800      | to 915 | 800 to   | 915 | 800 to 915 | - | 800 to 915 |



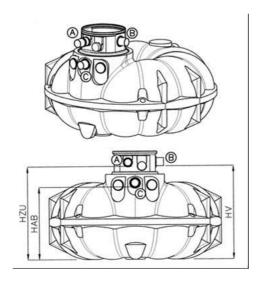
| With adapter ring and VS60 shaft extension + filter shaft (min. to max.) |             |          |         |             |     |            |   |             |
|--------------------------------------------------------------------------|-------------|----------|---------|-------------|-----|------------|---|-------------|
| NEO 1500                                                                 | NEO 3000    | NEO 3000 |         | EO 5000 NEC |     | 0008       | N | IEO 10000   |
| E [mm]                                                                   | 975 to 1410 | 1105     | to      | 1100 to     |     | 1130 to    |   | 1130 to     |
|                                                                          |             | 1500     | )       | 1500        |     | 1500       |   | 1500        |
| ET [mm]                                                                  | 1785 to     | 2155     | to      | 2220 to     | )   | 2390 to    |   | 2390 to     |
|                                                                          | 2220        | 2550     |         | 2620        |     | 2760       |   | 2760        |
| Ezu [mm]                                                                 | 875 to 1310 | 875      | to 1270 | 875 to 1    | 275 | 875 to 124 | 5 | 875 to 1245 |



The adapter ring and VS60 shaft extension can be cut for intermediate dimensions. Please follow the corresponding instructions.

#### 2.2 Outlet heights NEO with filter shaft

Filter shaft FI-1: Basket filter for standard garden systems



| NEO   | HZU  | HV   | HAB  |
|-------|------|------|------|
| 1500  | 910  | 910  | 535  |
| 3000  | 1280 | 1280 | 910  |
| 5000  | 1345 | 1345 | 955  |
| 8000  | 1515 | 1515 | 1145 |
| 10000 | 1515 | 1515 | 1145 |

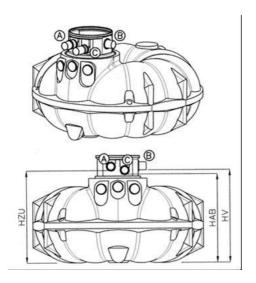
A: inlet DN 110

B: supply pipe DN 110 C: overflow DN 110 Hzu: inlet height

HV: supply line height

HAB: outlet/overflow height

### Filter shaft FI-2: Filter with siphon for standard house systems



| NEO   | Hzu  | HV   | HAB  |
|-------|------|------|------|
| 1500  | 910  | 910  | 860  |
| 3000  | 1280 | 1280 | 1230 |
| 5000  | 1345 | 1345 | 1295 |
| 8000  | 1515 | 1515 | 1465 |
| 10000 | 1515 | 1515 | 1465 |

A: Inlet DN 110

B: Supply pipe DN 110 C: Overflow DN 110 Hzu: inlet height

HV: supply line height

HAB: outlet/overflow height

### 3. Installation and Assembly

3.1 Basic questions about the location before installing the tank Clarify the following issues before installing the tank:

- Suitability of the soil for structural engineering in accordance with DIN 18196 soil classification
- Maximum occurring ground/stratified water levels taking the water permeability of the in-situ base into account and observing the permissible earth covering:
  - Ground/stratified water must not rise higher than the tank equator (the middle of the tank) at any time, even temporarily (during heavy rain). Therefore, the in-situ base must be sufficiently water-permeable (kf value > 5 x 10-6m/s).
  - In clay, cohesive, less water-permeable soils, there is a risk of the bathtub effect during heavy rain: The excavated pit fills with seepage water and the water level rises above the tank equator. The tank may be damaged as a result.
  - In such cases, use the heavy-duty NEO X-Line tank model or drain the seepage water through a ring draining system.
  - The issue of negative buoyancy must be assessed separately and is primarily relevant when the earth covering is relatively low (E<500 mm). (For details, see DOKK7302).</li>
  - If necessary, request ground surveys from the responsible building authority/conduct seepage tests.
- See **permitted earth covering** E (traversable by foot, 0.20 m to 1.50 m above the tank shoulder)

 Are there any traffic loads caused by cars/trucks? The requirements for the superstructure, shafts and earth covering then change. See chapter 3.

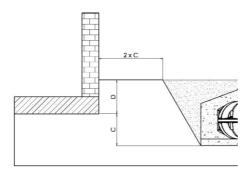
Are the **correct shaft accessories** (VS20, VS60, adapter ring, etc.) for achieving the desired or required elevations for all lines (frost protection?) in place (for more information, see the technical data in the previous chapter 1)?

#### Minimum distance from buildings:

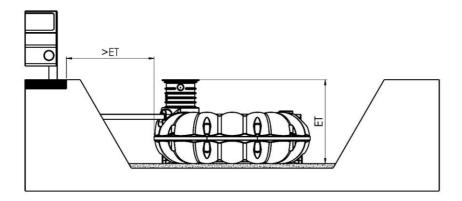
If the bottom of the excavation pit is below the lower edge of the foundation, the following applies:

Minimum distance Excavated pit to building =  $2 \times C$ C: Space between the excavated pit and the upper edge of the foundation.

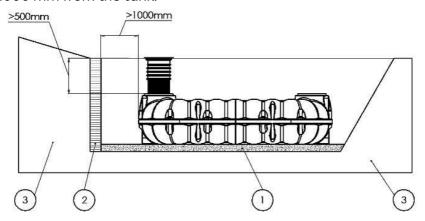
If there is any doubt, consult a structural engineer.



Minimum distance from surfaces that are driven on: If the tank is installed next to traffic areas that are driven on with heavy vehicles weighing over 12t, the recommended minimum distance from these areas corresponds to the pit depth at minimum:



Slopes/embankments: When installing the tank in the immediate vicinity (< 5m) of a slope, mound or embankment, a statically calculated supporting wall must be erected to absorb the earth pressure. The wall must protrude over the tank dimensions by at least 500 mm in every direction and must have a minimum distance of 1000 mm from the tank.



1 Bedding 2 Supporting wall 3 In-situ base

#### 3.2 Excavated pit and lines

The area requirements for the excavated pit are calculated from the footprint of the tank, the working space width of at least 500 mm and the widening towards the top caused by the embankment angle. The maximum earth covering is 1.50 m above the tank shoulder. We recommend an earth covering of up to 1.00 m to allow for easy access.

The slope is to be created in accordance with DIN 4124 with an angle of slope of 45 to 80° (depending on the base conditions and installation depth). The subsoil must be level and even and must ensure a sufficient load-bearing capacity. On the base of the excavated pit, a 200 mm-thick level bedding ① consisting of 8/16 mm round-grain gravel is applied and well compacted.

To use the plant throughout the year, the tank and the water-bearing plant parts must be installed in a frost-free area (usually approx. 600 to 800 mm below the ground surface level). You can obtain precise specifications for doing so from the responsible authorities.

The supply line should be laid down with a gradient of approx. 1% to the tank. Any overflow line or outlet line should have a higher gradient than the supply line.

The duct for the supply line from the house to the tank must be laid with a sufficient gradient. We recommend installing a sealing collar. Lay conduits in as straight a line as possible or use elbows with a maximum bend of 30°.

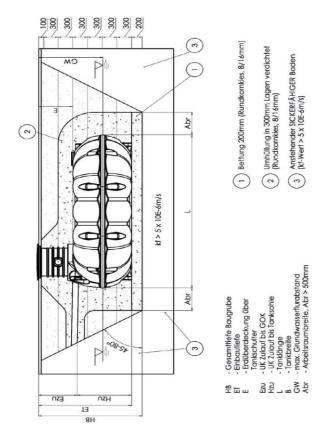
#### 3.3 Filling Material

Suitable filling material is required for both the tank bedding ① on the excavated pit and the tank surround ②. The filling material must be possible to tightly compact and must be water-permeable. It must form a solid packing and must not damage the surface of the tank.

Our recommendation: Round-grain gravel with a maximum grain size of 8/16 mm:

- It is very important to avoid hollow spaces in areas that are difficult to reach (recesses, tank underside).
- 8/16 round-grain gravel is particularly suitable in this regard because it reliably fills these hollows with a relatively low level of time and effort when prodded mechanically.
- 8/16 round-grain gravel does not absorb water, drains away accumulated water and stratified water effectively and provides a high level of supporting strength.
- 8/16 round-grain gravel can therefore be installed by nonspecialists.

Other filling materials can be used in individual cases. You can contact us for advice or read the technical data sheet DORW0100 (applicable filling materials for all Premier Tech Aqua/REWATEC tanks) for more information.

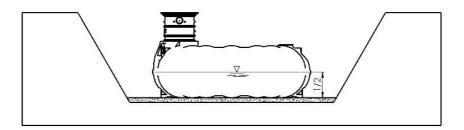


## Principle drawing: Installation of traversable NEO using the NEO 5000 with VS60 as an example

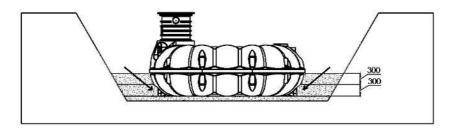
| HB — total excavated pit depth                     | ① 200 mm bedding (round-grain gravel, 8/16 mm) |
|----------------------------------------------------|------------------------------------------------|
| ET – installation depth                            |                                                |
| E – earth covering above                           | ② Surround in 300 mm layers, compacted (Round- |
| tank shoulder                                      | grain gravel, 8/16 mm)                         |
| Ezu – lower edge of inlet to GSL                   |                                                |
| Hzu – lower edge of inlet to tank bottom ③ In-situ | ③ In–situ WATER–PERMEABLE base (Kf value >     |
| WATER-PERMEABLE base                               | 5x10E-6m/s)                                    |
| L — tank length                                    | , <b>-</b> ,                                   |
| B — tank width                                     |                                                |
| GW – max. groundwater-surface distance             |                                                |
| Abr – working area width, WAW > 500mm              |                                                |
|                                                    |                                                |

#### 3.4 Installation

- 1. Carefully insert the tank into the excavated pit (for example, suspended by straps).
- 2. Align the tank horizontally while observing the work area width.
- 3. Half-fill the tank with water. For retention cisterns, temporarily deactivate the outlet, for example, by fixing the outlet throttle valve in a raised position. The fill is omitted when using the infiltration ditch.



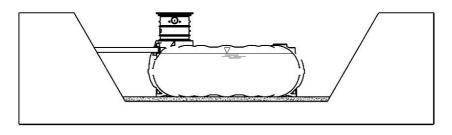
4. Fill the space between the outer side of the tank and the excavation pit wall with filling material (round-grain gravel, 8/16mm) in layers of 300 mm and carefully compact each layer up to the tank equator by hand (e.g. with a hand rammer).

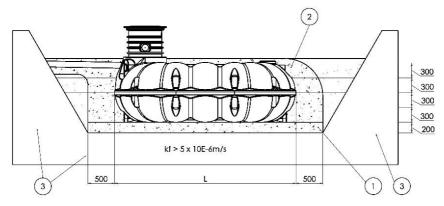


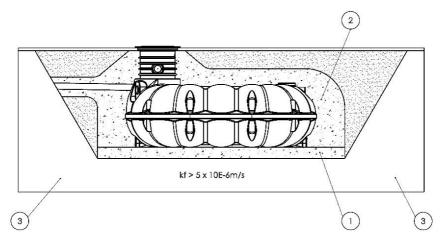
5. Then, fill the tank recesses with filling material (round-grain gravel, 8/16mm) with particular care. Manually push in the filling material to ensure that even hollow areas that are difficult to access are filled and compacted.



- 6. Connect the lines (inlet, overflow where applicable, supply pipe).
- 7. Then, completely fill the tank with water.
- 8. Continue to cover the tank with filling material (round-grain gravel, 8/16mm) until it is at least 200 mm above the tank shoulder.
- 9. Compact the filling material in individual layers of 300 mm. If necessary, use lightweight machinery at this stage if it does not make contact with the tank wall.
- 10. Ensure that the following degrees of compaction are achieved: Areas that can be walked on: degree of compaction M according to EN 1046 Areas that can be driven on: degree of compaction W according to EN 1046
- 11. If necessary, use the excavated soil or other material that is sufficiently stable and permeable to fill the remaining area outside of the tank surround.







① Bedding ② Filling material ③ In-situ base

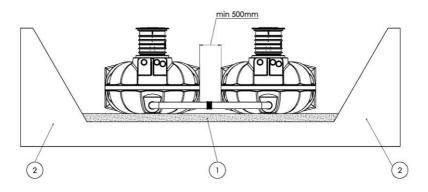
After the installation, the tank, recesses and shaft system must be completely surrounded by a layer of at least 200 to 300 mm of compacted filling material (round-grain gravel 8/16mm).

### 3.5 Connecting Multiple Tanks

If you want to connect multiple tanks to each other, connecting pieces can be welded onto the tank at the factory. These connecting pieces can be used to connect the tanks with suitable piping. Suitable collars for the junctions between the connecting pieces and piping are available. (For DN 110 item no.: RWZT0036)

Details are available upon consultation.

The minimum distance between the tanks is 500 mm.

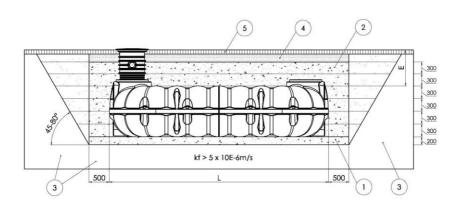


1 Bedding 2 In-situ base

### 4. Areas Driven On By Car and Truck

NEO tanks can be constructed to be driven on by car and truck by using the appropriate accessories. Responsibility for the overall static concept lies with the client/contractor and is heavily dependent on the condition and thickness of the roadway and base layer and the type of use. The following examples are intended for guidance but must be verified through a stability analysis adapted to local conditions.

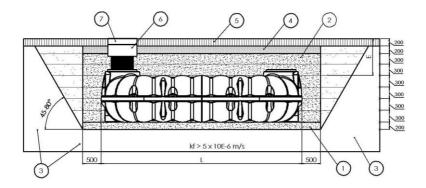
Diagram for areas driven on by car with BS60 shaft and steel cover (traversable up to a max. axle load of 2.2t) Earth covering  $E \ge 600$  mm (max. 1500 mm)



| 1   | 200 mm bedding (round-grain gravel, 8/16                              |
|-----|-----------------------------------------------------------------------|
| 2   | mm) Surround compacted in 300 mm layers (round-grain gravel, 8/16 mm) |
| 3   | In-situ WATER-PERMEABLE base (kf value > 5 x<br>10-6m/s)              |
| 4   | Gravel base course,                                                   |
| (5) | load-distributing<br>Driving surface                                  |

Diagram for area driven on by truck (class D frame and cover on site, traversable up to a max. axle load of 11.5t (SLW 30 for heavygoods vehicles))

Earth covering  $E \ge 800$ mm (max. 1500 mm)



- 200 mm bedding (round-grain gravel, 8/16 mm)
- 1 3 4 5 6 7 Surround compacted in 300 mm layers (round-grain gravel, 8/16 mm)
- In-situ WATER-PERMEABLE base (kf value  $> 5 \times 10-6 \text{m/s}$ )
- Gravel base course
- Driving surface, load-distributing
- Concrete ring
- Shaft cover

### 5. Opening and Closing The Top Cover

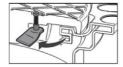
Tool: Size 13 spanner

Secure open tanks to prevent anyone falling in.

Always close the tank securely after completing the work by turning the locking latch on the TopCover to the **locked** position, for example, to provide a child safety feature.

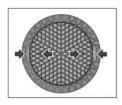
#### Opening the cover:

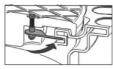
- Turn both of the nuts that are visible on the cover by 90° in a clockwise direction to unlock the cover.
- Lift off the cover to perform visual inspections or other service work.



### Closing the cover:

- Position the cover so that the retaining pin on the lower side of the cover can be inserted into the corresponding shaft hole.
- The visible locking latch nuts should be across from the shaft grip recesses.
- Turn the two nuts by 90° in a clockwise direction until they stop in order to seal the cover tight.
- Test whether the cover is tightly sealed.





### 6. Manufacturer's Declaration

#### No. DQKK8404 230118

1 Identification code NEO/NEOplus Standard Flat Tank

2 Item no. RWNExxxx/ SGNExxxx (without letter H in the item no.)
3 Purpose of use PE tank for underground storage/treatment of water

4 Manufacturer PREMIER TECH AQUA GmbH, Am Gammgraben 2, 19258 Boizenburg,

Germany

5 Authorised representative Marco Rumberg CEO, rumm@premiertech.com

6 Applied harmonised standards EN 12566-3 2005+A2:2013

C.6 (structural stability)

A.2 (water impermeability) First year of the declaration: 2018

7 Notified testing body PIA GmbH (NB 1739) performed the initial testing and compiled the test

report:

P1A2017-ST-PIT-1702-1014.01 for structural stability (1.50 m earth

covering)

| Stability (pit inspection)    | PIA2017-ST-PIT-1702-1014.01:              |                                                     |  |  |  |
|-------------------------------|-------------------------------------------|-----------------------------------------------------|--|--|--|
|                               | Passed (WET conditions), 1.5% deformation |                                                     |  |  |  |
| NEO model                     | Size                                      | Max. immersion depth into ground water according to |  |  |  |
|                               |                                           | installation specification: To tank equator         |  |  |  |
| NEO 800                       | 0.8 m <sup>3</sup>                        | WET=0.35 m                                          |  |  |  |
| NEO 1500                      | 1.5m <sup>3</sup>                         | WET=0.40m                                           |  |  |  |
| NEO 3000                      | 3.0m <sup>5</sup>                         | WET=0.52m                                           |  |  |  |
| NEO 5000                      | 5.0m <sup>6</sup>                         | WET=0.56m                                           |  |  |  |
| NEO 8000                      | 8.0m <sup>3</sup>                         | WET=0.63m                                           |  |  |  |
| NEO 10000                     | 10m <sup>5</sup>                          | WET=0.63m                                           |  |  |  |
| NEOplus 15000 to 50000        | 15 to 50 m <sup>3</sup>                   | WET=0.63m                                           |  |  |  |
| Water impermeability          |                                           | Passed                                              |  |  |  |
| (test with water)             |                                           |                                                     |  |  |  |
| Durability                    | Passed                                    |                                                     |  |  |  |
| Reaction to fire              | E                                         |                                                     |  |  |  |
| Release of harmful substances |                                           | NPD                                                 |  |  |  |

The manufacturer alone is responsible for the issue of the declaration as per number 4.

This declaration certifies compliance with the specified regulations, guidelines and standards. However, it does not imply any guarantee of properties. The safety instructions and supplied instructions for installation, operation and maintenance must be complied with

Signed for the manufacturer and on behalf of the manufacturer

19. Juni/

Boizenburg, Germany, 23 January 2018

This product is a non-harmonised construction product and this document is therefore a voluntary manufacturer's declaration. In the absence of other applicable standards, reference is made to a comparable construction product (small wastewater treatment systems with EN 12860).

During the pit test according to EN 12566, the deformation is determined in practice by measuring the volume lost in an empty tank after 21 days under installed conditions. Premier Tech considers deformations of up to 5% as permissible (the standard tolerates up to 20%).

According to EN 12566, the pit test can be performed without ground water influence (DRY) or with ground water influence (WET).





