RAINWATER SYSTEMS

ROCKWOOL®

Quick Installation Guide

ROCKWOOL®

Installation steps

The installation process for a Rockflow buffer consists of several steps:

- Preparation of the construction site;
- Placement of the Rockflow buffer;
- Connecting the pipework;
- Adjustment of elements;
- Required equipment for installation;
- Cover of the Rockflow buffer.

Tools & personnel

The installation of a Rockflow buffer requires the following tools and personnel:

- Two construction workers;
- Personal protective gear (see Safety);
- Sharp, serrated knife (suitable for stone wool);
- Mobile crane with a tiltable pallet-fork;
- Vibrating compactor; approx. 500kg with a compaction strength of approx. 6 tons;
- Standard equipment for excavating, filling, covering and sealing of the construction site.

Safety

Follow the instructions below when installing a Rockflow buffer.

	Wear long sleeves and protective gloves.
	Wear a dust mask.
	Put on safety glasses.
	Warning! Rockflow elements can cause temporary irritation after contact with the skin. When irritation does arise despite protective measures, rinse the skin with cold water.

PREPARATION OF THE CONSTRUCTION SITE

- Before excavating the construction pit, ensure that the stone wool pallets can be placed as close as possible to the installation location.
- Make sure that you have enough space around the construction pit to enable the Rockflow package to be filled from the side with sand/granulate.

A

Excavate the site where the Rockflow system will be applied **A**.

The excavation should be approx. 2m wider than the width of the Rockflow buffer. This provides enough space for connecting the pipelines and for filling and compacting the sand.

B

Level and profile the substrate **B**.

Do not use an intermediate layer (e.g. gravel, tarp) between the soil and the Rockflow buffer. This can compromise the drainage qualities.

Use a rope or laser for a straight Rockflow buffer **C**.

C

Place the pallets with Rockflow elements as close as possible to the installation site **D**.

When placing a pallet, tilt it on its side so that the elements stand upright **E**.

Remove the pallet and the plastic foil.

D

E

PLACEMENT OF THE BUFFER

F

G

Study the provided Rockflow buffer design drawing.

The design drawing contains information on the orientation and size of the buffer, as well as on the location of the internal conduits.

Choose a starting point and place the first element according to the design drawing.

Always place a Rockflow element upright F.

Apply outer elements in stretcher bond, with wider buffers on a regular basis in the buffer field (approx. every 2.25m) G.

Stack elements by lowering them into place H. Do not push elements sideways towards each other, as soil will pile up in between (equal to placement of pavers) I.

When in place, apply force to the elements to optimize the contact between them J.

After completing a row, place about 30cm of soil at both ends to secure it.

H

I

H

J

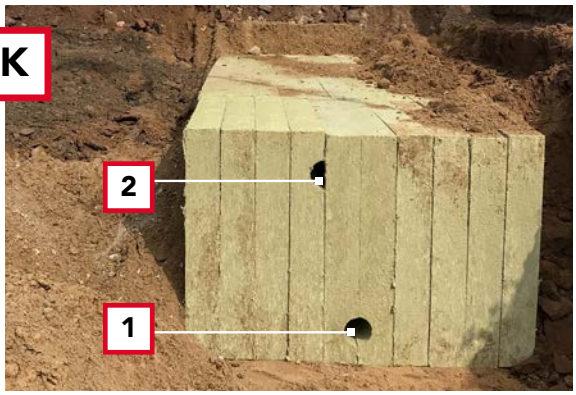
CONNECT THE PIPING

Study the provided design drawing to identify which pipelines have been assigned to which channels in the Rockflow buffer.

⚠ *All external pipelines must have a diameter of 125 mm (DK: 110 mm) and must be inserted at least 25 cm into the Rockflow elements.*

Insert the water supply pipes into the assigned bottom channel / opening **K1**.

The supply channels must be connected by means of 45 degree bends **L**.



Insert the air ventilation pipes into the assigned upper channel / opening **K2**.

Connection of venting to pit/shell must be at least equal to the top of the package **M**.

Seal any unused channels with a 25cm piece of pipe fitted with an end cap to create a secure fit **N**.

O

P

Q

R

ADJUSTMENT OF THE ELEMENTS

Use a sharp, serrated knife to remove pieces of stone wool to fit the buffer around any obstacles O.

Make sure that any modifications do not interrupt or expose the internal conduits.

Do not remove more material than necessary.

Create internal intersections
When an element is placed perpendicular to a row, it blocks the internal conduit of that row. To solve this:

Carve or drill holes in the perpendicular elements to create an intersection between the internal conduits P.

Leave out a part of the buffer to allow an obstacle to pass through Q.

Use pipes (Ø125 mm, DK: Ø110mm) to bridge the gap between the buffer's internal conduits Q.

INSTALLATION OF FOUNDATION PACKAGE

The foundation package (mixed granulate and any sand) should preferably be installed from the side of the Rockflow system. If space is limited and/or the buffer is out of reach, the use of a dumper type vehicle (see photo R) is recommended to push the granulate/sand forward over the Rockflow system. The axle loads in the table below must be taken into account. Concrete or metal road plates can be used if the axle load is too high (filled bucket with extended boom) or if the material is not compacted.

The foundation must be installed in layers (0.30 m) and compacted in accordance with the applicable regulations R.

The table below shows the maximumpermissible load during the execution /construction phase.

⚠ *Consult the Rockflow datasheets on the website (or scan the QR code below) for the data on the maximum load using the pavement requirements in the use phase.*

Place the Rockflow pallets with a mobile crane or a front loader as close as possible to the intended installation site.

Coverage on Rockflow in the implementation phase (construction phase)	**Maximum axle loads that are permissible during implementationon the compacted[1] foundation package[2]**			
	Rockflow WM2005		**Rockflow WM2007**	
	Axle loads[3]	Single wheel load	Axle loads[3]	Single wheel load
25 - 45 cm	< 3 ton	< 0.8 ton	< 6 ton	< 1.5 ton
45 - 65 cm	< 6 ton	< 1.5 ton	< 10 ton	< 2.5 ton
> 65 cm	< 10 ton	< 2.5 ton	< 15 ton	< 3.7 ton

[1]: In accordance with Standard RAW provision 2015 art. 80.16.05) delivery, application and compaction.
[2]: Construction of foundation package minimum 0.30m Mixing granulate 0 / 31.5 (NEN-EN 13242 (2015) + possibly Sand in Sandbed (Standard RAW 2015 provision 2015 art.22.06.03)
[3]: Axle load based on rear axle with double tires (NEN-EN 1991-2 par. 4.3.2), Wheel print 0.4m * 0.4m.

scan QR-code

Rockflow datasheets

S

T

U

V

W

COVER THE ROCKFLOW BUFFER

Place soil around the edges of the buffer S. Compact the soil according to the applicable standards T.

Place a layer of soil on top of the buffer U.

Place and compact a foundation layer according to the applicable standards V.

After a Rockflow buffer has been secured and covered with soil, it is able to support a (limited) load of machinery.

Place a top layer (e.g. pavement or grass) W

When connecting, ensure the wells, gullies and pipes are clean. Also clean the gullies after (swept) sand has been removed from the pavement X.

AFTERCARE AND MANAGEMENT AFTER COMPLETION OF A PROJECT

Within two months of completion of a project and in all cases before the second completion, gutters must be cleared of sand which has flowed into them during the implementation of the project and of grout sand following the completion of the project.

X

You have successfully installed a Rockflow buffer!

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