TRICEL

GENERATIONS OF INNOVATION

Product brochure

Rigofill® ST-A / Rigofill® ST-S

Underground storage/infiltration modules according to EN 17152-1

Rigofill ST – system

Rigofill ST-Advanced

- Installation depth up to **6 m**
- Complies with EN 17152-1

- SLW 60/HGV 60

Rigofill ST-Standard

- Installation depth up to **4 m**
- Complies with EN 17152-1

- SLW 60/HGV 60

NB

In what follows, an illustrative explanation of the Rigofill system will be given by means of the green module.
All properties and advantages also apply to the Rigofill ST-S system. The systems have been optimised for different installation situations.

In the following, please be sure to pay attention to this sign.
Statements marked with this sign apply to both Rigofill ST-A and Rigofill ST-S.

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Complies with EN 17152-1

EN 17152-1 is the first product standard for storage/infiltration modules on a European basis.
It was published in November 2019 together with the test standards for short-term compressive strength (EN 17150) and long-term compressive strength (EN 17151).

This allows determining and comparing the long-term compressive strength based on a European standardised test method for the first time.

The standard will now gradually replace national approvals or be used as a basis for the test requirements of approvals.

The focus is on determining the long-term breaking load. This is determined from extensive tests lasting up to several 1000 h. Using statistical, standardised evaluation methods, long-term compressive strength is then determined for a service life of at least 50 years.

While EN 17152-1 only requires proof of the vertical long-term compressive strength when the storage/infiltration modules are used in infiltration systems, proof of the vertical and horizontal long-term compressive strength is required when they are used as a storage or temporary storage system.

Furthermore, there are detailed specifications for the material tests as well as the requirement of an EN-compliant marking of the modules, in which, depending on the application, long-term compressive strength is also required for the first time.

EN

EN 17152-1

Plastics piping systems for non-pressure underground conveyance and storage of non-potable water – Boxes used for infiltration, attenuation and storage systems

- Part 1: Specifications for storm water boxes made of PP and PVC-U

Storing stormwater with storage/infiltration systems

Basic element for underground water storage facilities

Rigofill are plastic tanks to be installed underground (storage/infiltration modules) in which water is collected and stored. Storage/infiltration systems temporarily collect stormwater and discharge it later. In addition to infiltration using underdrained swale systems, pipe swales, and gravel swales common in the past, increasingly more storage/infiltration systems are being built today.

The storage space of the storage/infiltration system consists of numerous Rigofill modules which can be combined three-dimensionally to form large systems.

The advantage of this method is that the void ratio is up to three times larger in these infiltration systems than in gravel swales which saves space and excavation work. Rigofill is a modular system which is characterised by high flexibility, rapid installation and a high level of user-friendliness.

Application – infiltration

Stormwater infiltration – giving back to nature

Large amounts of stormwater can reduce the performance of wastewater treatment systems. Infiltrating unpolluted stormwater nearby has therefore several advantages. A constant growth in built-up areas and an increase in impervious surfaces prevent natural infiltration of stormwater into the soil. Special infiltration systems are used in order to discharge it to the water cycle.

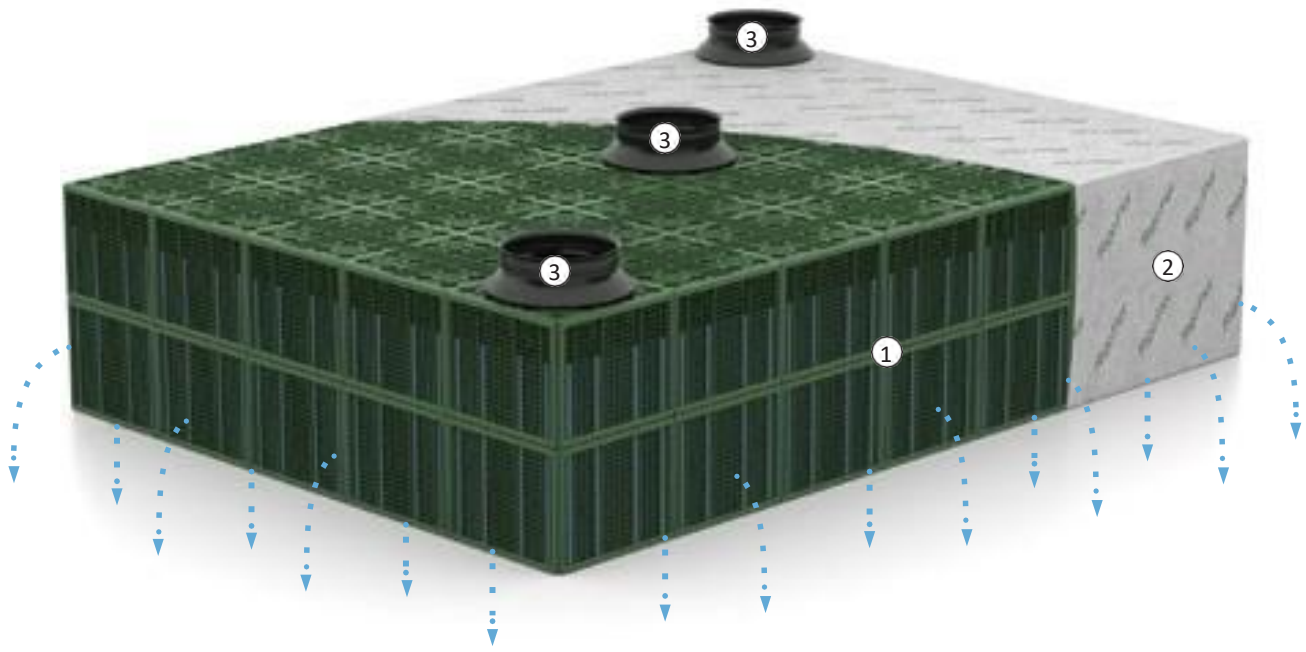
In addition to infiltration using pipe swales, increasingly more storage/infiltration systems are being built. The advantage of this method is that the storage volume of the infiltration system is increased, and space and excavation are saved as compared to gravel swales.

Stormwater is thus returned to the natural water cycle and can contribute to producing new groundwater. Infiltration systems are subject to very high requirements. Consequently, they have become an important component of urban drainage.

Storage/infiltration systems considerably increase the underground storage volume. High-performance storage/infiltration systems can be installed even in confined spaces. In particular in urban construction no additional space is required and precious building ground is saved.

Infiltration

1. Rigofill ST-A storage/infiltration module
2. Geotextile
3. QuadroControl ST system shaft



Application – retention

Retaining stormwater – instead of flooding

If subsoil conditions are unfavourable to infiltration, the goal is to retain the stormwater and ensure a retarded, time-lagged discharge. Exposure to impulsive stress can be eliminated or reduced in sewer networks, wastewater treatment systems and waterbodies.

Stormwater retention systems retard the infiltration of stormwater. They are comprised of a watertight retaining element, an inlet and a vortex outlet.

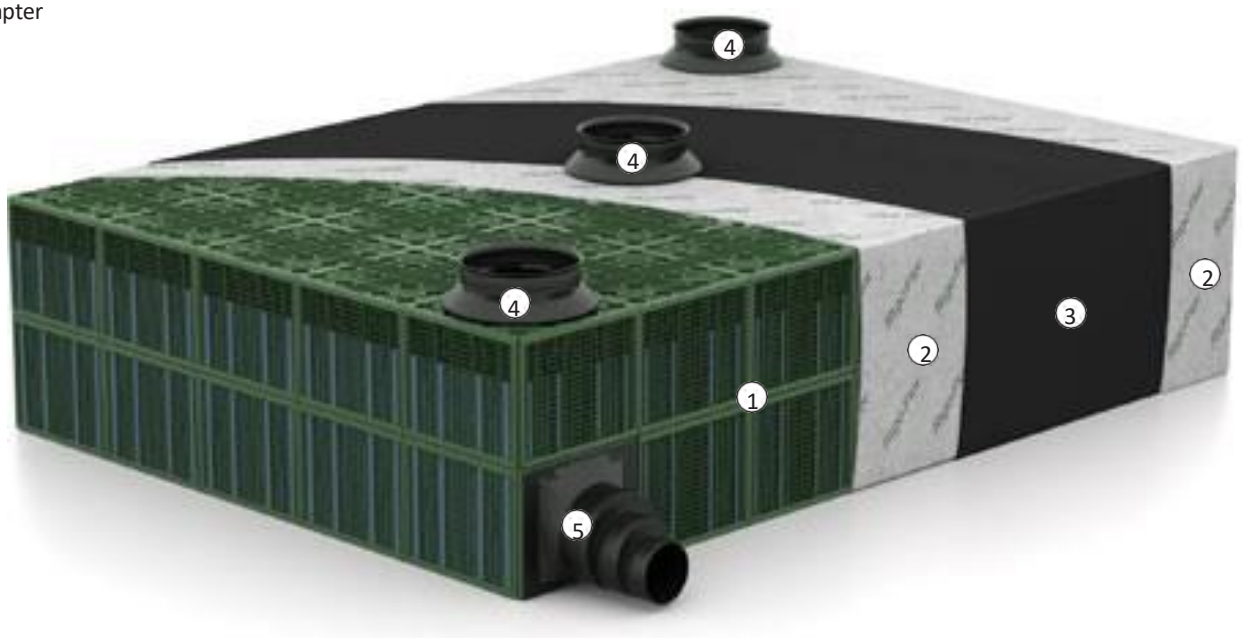
The stormwater distributes evenly in the system where it can be stored and is then discharged in a controlled manner through throttle shafts. If infiltration must be avoided or to prevent unintended discharge of groundwater or strata water (e.g., in case of contaminated soil), it is necessary to waterproof the retention system.

Stormwater runoff from impervious surfaces that cannot infiltrate naturally leads to peak loads in sewer systems.

Stormwater retention facilities collect stormwater in an underground storage tank and discharge it in a retarded manner but continuously. Their very short construction times make storage/infiltration systems an inexpensive alternative to conventional retention facilities such as retention channels or underground concrete tanks.

Retention

1. Rigofill ST-A storage/infiltration module
2. The geotextile
3. Impermeable membrane (KDB)
4. QuadroControl ST system shaft
5. Adapter



Application – harvesting/fire water storage

Harvesting stormwater – saving drinking water

Water – particularly drinking water – is a priceless resource which should be treated responsibly and used sparingly. It is therefore wise to collect, store and use stormwater if the water must not necessarily be suitable for drinking purposes, instead of allowing the water to infiltrate into the soil unused or diverting it into the sewer system.

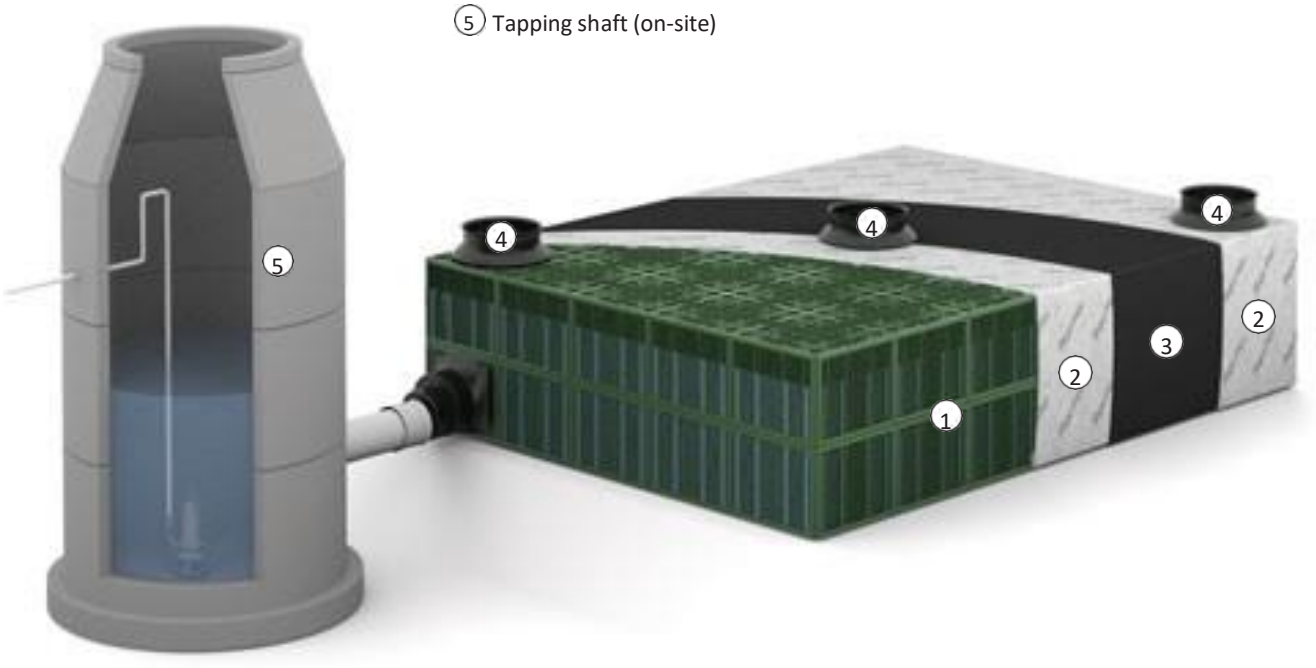
There are many examples: irrigation for greens, car wash, use in toilets, etc. Water is diverted into a waterproof storage/infiltration system and can be supplied for use via a pumping system. The use of the Rigofill system allows for finding solutions that fit project-specific requirements – even under the most difficult conditions such as very tight space, narrow conditions, low cover, high groundwater level, etc.

Stormwater harvesting systems provide water for different domestic and industrial water uses. They comprise a watertight retaining element, an inlet with upstream stormwater treatment system, a pump shaft and a system control.

Using Rigofill for fire water storage also saves water, since system checks can be made in a filled state and water does not have to be pumped out as is the case with conventional concrete tanks.

Harvesting/fire water storage

1. Rigofill ST-A storage/infiltration module
2. The geotextile
3. Impermeable membrane (KDB)
4. QuadroControl ST system shaft
5. Tapping shaft (on-site)



Increased strength for the storage/infiltration system

The supporting grid – for increased requirements

The supporting grid was designed to expand the range of applications for increased requirements, e.g., for cases of groundwater outside the system or multiple-layer systems with high installation depths.

Installation situations like these lead to increased horizontal loads on the storage/infiltration system and installation limits being restricted significantly.

This led to the development of an additional supporting element for the Rigofill designs, i.e., the so-called supporting grid. The supporting grid features a honeycomb design and exactly matches the column structure of the two half elements. It is installed between two half base elements. The additional support increases the horizontal strength by approx. 60 %, thus allowing a significant expansion of the installation limits.

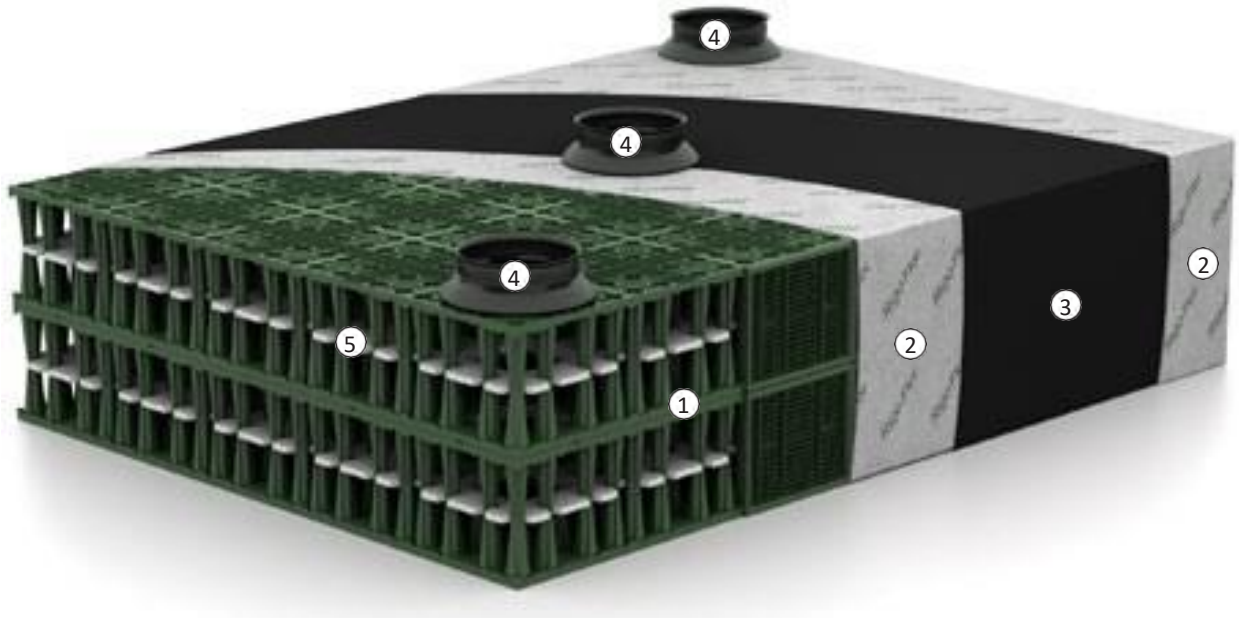
When you place an enquiry, we will check and determine whether or not the supporting grid is required. The verifiable static verification can be prepared by TRICEL project-specifically and made available, if required.

NB

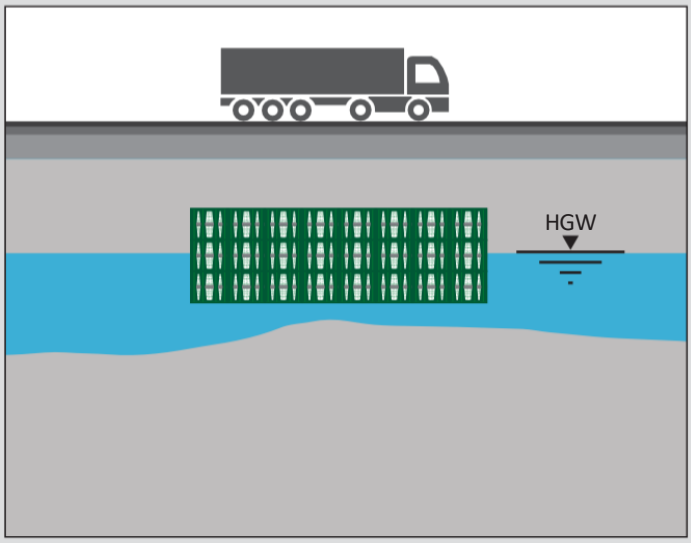
The supporting grid is available for any Rigofill design and will be supplied in the respective module colour. The supporting grid is illustrated here in grey for reasons of clarification only.

Retention/harvesting/fire water storage

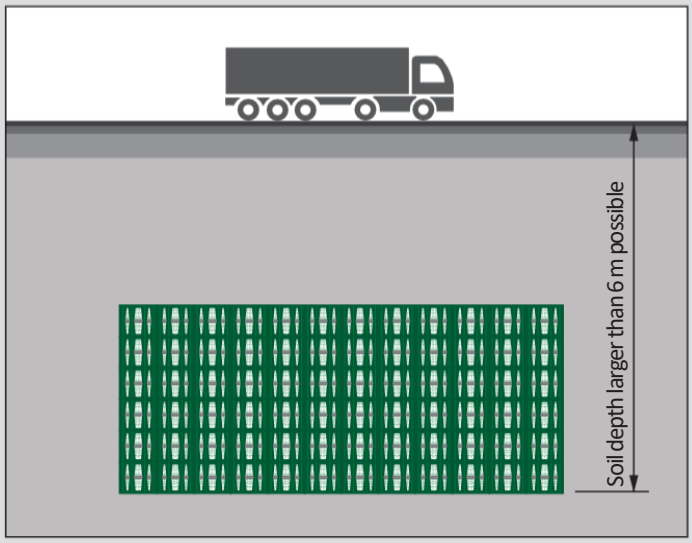
1. Rigofill ST-A storage/infiltration module
2. The geotextile
3. Impermeable membrane (KDB)
4. QuadroControl ST system shaft
5. Supporting grid



Installation in groundwater



High installation depth of a multiple-layer storage/infiltration system



Structure of module with supporting grid

Rigofill ST-A with supporting grid

Structure of shaft with supporting grid

QuadroControl ST with supporting grid

Modular design

Individual system geometries due to modular design

The sizes (length and width) of Rigofill storage/infiltration systems can be freely designed with hardly any limitations. The square 800 mm block layout can be easily adapted to fit nearly any layout.

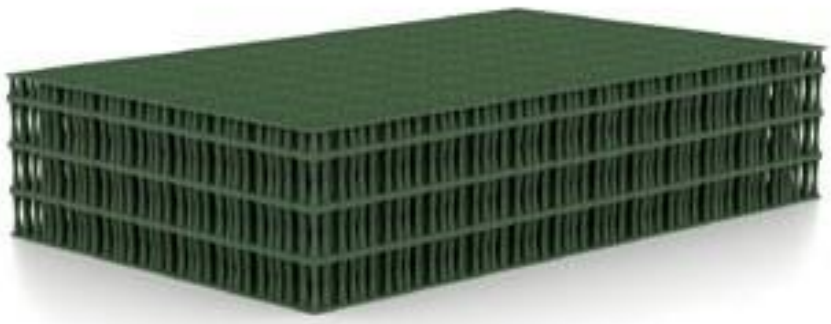
With heights of 660 mm (full block) and 350 mm (half block), systems can be built in various sizes to accommodate any single-layer or multiple-layer combination. Therefore, the system can be very easily adapted to on-site requirements. Under high groundwater levels or low permeability of the native soil, for example, rather shallow-depth systems are to be preferred. For soils with good permeability, however, high and compact systems are favourable and may be built accordingly. The maximum space available is used.

Possible system geometries

Rigofill ST-A **1-layer**

Rigofill ST-A **2-layer**

Rigofill ST-A **3-layer**



Rigofill ST-A **3 1/2-layer**

Storage volume

Extremely high volume

The Rigofill full block provides a storage volume of 406 litres with a gross volume of 422 litres. With a storage volume of more than 96 %, it stores three times as much water as gravel swales.
The half block has a height of 350 mm and is used if shallow systems are required, e.g., in case of high groundwater levels. With a gross volume of 224 litres, it offers a storage volume of 212 litres.

Column void

The storage/infiltration module is 100 % available as storage space. Large openings at the column base and at the column connection allow unrestricted filling and emptying of the columns.

Storage/infiltration systems as compared to gravel swales

Pipe swales and gravel swales can only use approx. 30 % of their volume to store water. Therefore, three times the required water storage volume must be provided by excavation. This requires lots of space which is frequently not available in urban areas. Rigofill storage/infiltration systems save an enormous amount of space and excavation work. Thus, subsoil storage spaces for stormwater can be built in a very efficient and cost-saving way.

Storage/infiltration systems considerably increase the storage space. High-performance storage/infiltration systems can be installed even in confined spaces.

Designed & engineered in Germany

Future-proof system

Strong and durable storage/infiltration systems require technically reliable and ideally matched components. All Rigofill ST-A and Rigofill ST-S system components combine to a reliable system for stormwater storage which withstands any stress for decades. Repairs in case of damage are complicated and expensive in particular with large underground systems.

In the production of all system components, TRICEL attaches greatest importance to using tried-and-tested materials.

Consistent quality control and the certification of stormwater management systems by independent testing institutes provide design engineers, investors, building companies and installers with utmost reliability.

Superior materials

Rigofill ST-A and Rigofill ST-S modules are made of polypropylene and are especially robust and durable. The modules and all system components are manufactured in Germany according to certified processes. Ideal storage and transport conditions furthermore guarantee that customers receive the kind of quality they expect when buying TRICEL products.

Installation

Easy construction site handling

Requires little space for storage

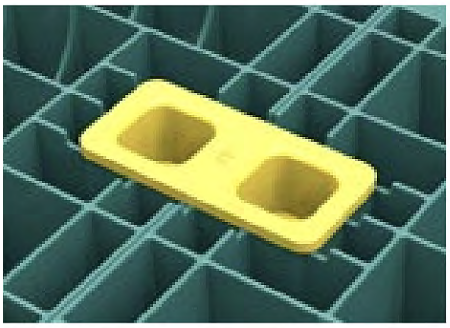
The storage/infiltration modules are delivered in compact, stacked units with 17 modules per pallet. The easy stackability of the Rigofill ST-A and ST-S modules allows them to be stored even in confined construction space, even outside the excavation pit. This facilitates installation, since no additional storage space must be provided in the excavation pit. Installation is neither impeded nor constrained.

Pre-assemblv

Depending on the requirements, Rigofill ST-A and Rigofill ST-S modules can be pre-assembled in no time at all, both outside and inside the excavation pit in just one easy step. Easy high tensile strength snap connections allow for combining two half elements to create a reliable unit in only a short period of time. This can be easily done by one person only without requiring any additional tools. The moveable parts of the snap connection are recessed and thus protected from damage.

Easy assembly

There is no need to adhere to any complex installation pattern – the pre- assembled modules or half blocks can just as well be connected to create a single unit. The low weight allows this to be done by one person only. Connectors establish firm connections between the individual modules. The surface can be accessed immediately without any risk of accidents, since the hole size of the columns is dimensioned respectively
(< 100 mm). Thus, no additional covers of column holes are required.



Single-layer connector

Multiple-layer connector

Connectors

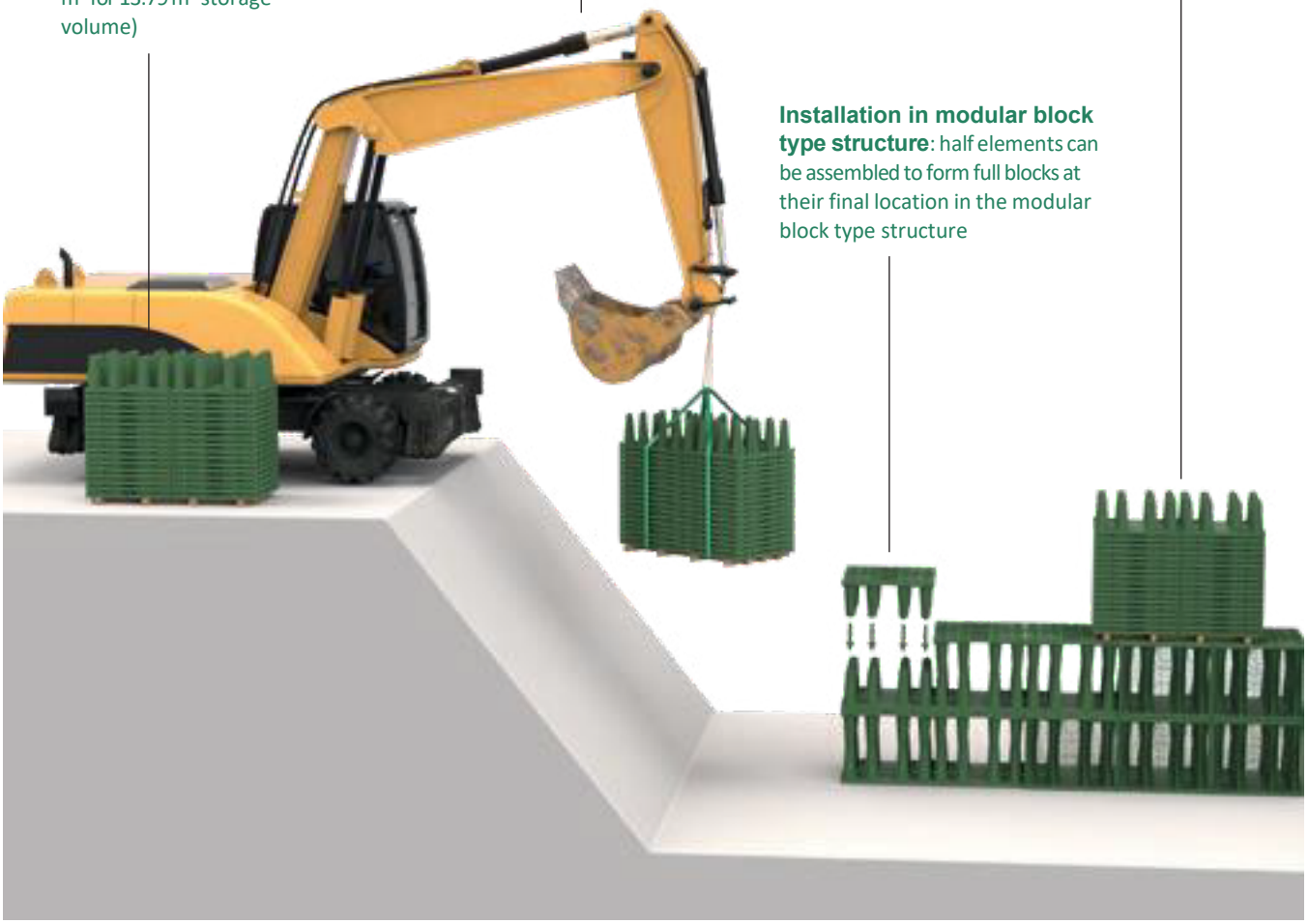
Connectors help secure the modules in place. Secure modules using connectors on the top surface of the module in the centre of each edge that is adjacent to another module.

Easy construction site handling
(reduced machining time, up to 34 full blocks can be moved with one stroke)

Little space requirement
for on-site storage (1.28 m^2 for 13.79 m^3 storage volume)

Pallets can be stored in the excavation pit –> **short distances** during installation of blocks

Installation in modular block type structure: half elements can be assembled to form full blocks at their final location in the modular block type structure



Inspection

CCTV inspection even when filled

Storage/infiltration systems are durable structures for urban drainage; they must work reliably for decades. Durability and reliability are essential requirements. The best way to inspect the state of a system using state-of-the-art technology is CCTV inspection. Thus, a storage/infiltration syste m can be checked excellently – for final acceptance or later. This establishes safety for authorities, engineers, construction companies, customers, and operators.

Cross-shaped inspection tunnel

Rigofill modules have a cross-shaped tunnel which makes the storage/infiltration system camera-accessible and flushable in two axes and thus in four dimensions.

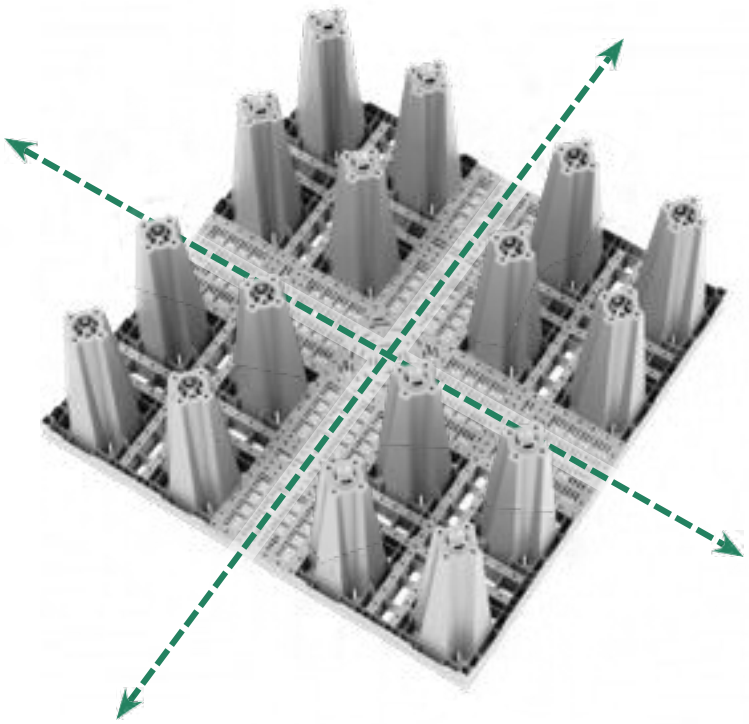
The special and open design of the inspection tunnel allows for an unobstructed view of the entire interior and not only the inspection tunnel.

For example, the load-bearing elements, the condition of the geotextile and the entire soil area can be visualised. Rigofill ST-A and Rigofill ST-S provide excellent possibilities for inspecting the interior of the system at any time.

The ideal, level and vibration-free running surface and the slim column structure allow for an unobstructed view of the entire module volume. The QuadroControl ST shaft for Rigofill, which can be integrated, allows for easy access of the automotive dolly for both professional final acceptance inspection and flushing technology.

100%

inspectable



Recommended camera equipment

A standard sewer camera is sufficient for camera inspection. A rotatable and height-adjustable camera head allows for an optimal view of the lateral soil area, a controllable carriage ensures a centred positioning, and high-performance optics together with lighting allow for a perfect image.

Certified CCTV accessibility

Rigofill has been designed for the use of modern CCTV inspection technology. The inspectability of the Rigofill and QuadroControl ST system unit has been tested and confirmed by leading manufacturers of pipe CCTV inspection technology!

Recommended: tender invitation for final acceptance inspection

Final acceptance of sewers using camera inspection has long since become a matter of course in sewer construction. The final acceptance inspection is also important in the construction of storage/infiltration systems! Planning engineers should absolutely include this in their tender documents. For instructions on the professional system configuration of the CCTV inspection technology, please refer to www.tricel.ie or tricel.co.uk.

Loading – Rigofill ST-A

Storage/infiltration systems are subsoil structures and must have sufficient load- carrying capacity against impacting soil and traffic loads. Rigofill ST-A storage/infiltration systems are extremely robust and have been designed for traffic loads up to SLW 60/ HGV 60. TRICEL storage/infiltration systems have been designed for a minimum lifetime of 50 years.

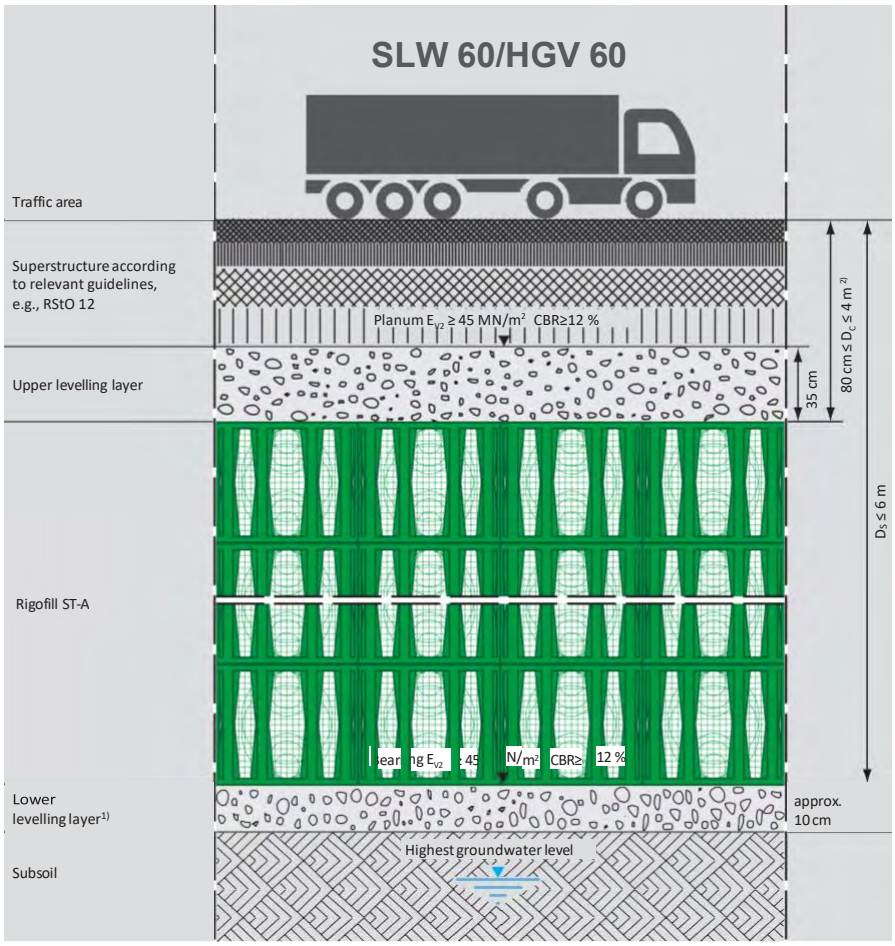
Rigofill ST-A

SLW 60/HGV 60

Installation under traffic areas

When installed under traffic areas, relevant national guidelines, e.g., RStO 12, must be observed. To build the planum for the road construction, an upper levelling layer must be provided. It should preferably be built as a gravel sub-base with a thickness of at least 350 mm, other materials usually result in larger covers. Generally, a uniform modulus of deformation $E_{V2} \geq 45$ MN/m² must be proven on the planum.

Standard installation under a traffic area



The subsoil structures must have sufficient load-carrying capacity against impacting soil and traffic loads to ensure reliable stability. This is why Rigofill ST-A is suitable for traffic loads of up to SLW 60/HGV 60. With conventional installation parameters*, depths of cover of D_c 4 m and soil depths of D_s 6 m are possible for infiltration systems.

A project-specific stability analysis can be prepared by TRICEL.

* SLW 60, specific weight of soil 19 kN/m³, mean soil temperature max. 23°C,

NB

for HGW over structure soil

Rigofill systems, which are used as watertight storage systems with impermeable plastic membrane, have been designed for application above the highest groundwater level (HGW).

High installation depths and use in groundwater are possible under corresponding technical conditions after consultation with TRICEL. (See pages 10–11)

Please contact us.

[1] At least the same permeability (k_f) as the subsoil for infiltration systems
[2] Lower cover upon request

Please observe the installation manual on tricel.ie and tricel.co. uk

Example – Rigofill ST-A

Loading – Rigofill ST-S

Storage/infiltration systems are subsoil structures and must have sufficient load-carrying capacity against impacting soil and traffic loads. The special material composition of Rigofill ST-S makes it ideal for surfaces with less traffic such as sports fields or green spaces. TRICEL storage/infiltration systems have been designed for a minimum lifetime of 50 years.

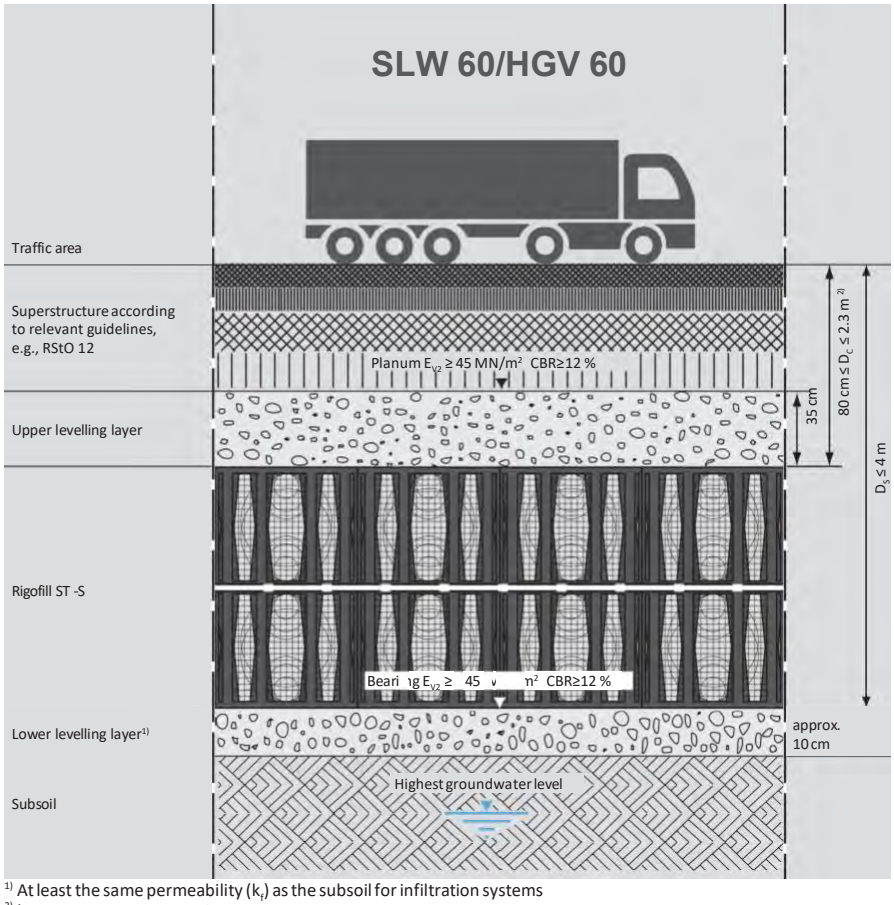
Installation under traffic areas

When installed under traffic areas, the relevant guidelines, e.g., RStO 12, must be observed. To build the planum for the road construction, an upper levelling layer must be provided. It should preferably be built as a gravel sub-base with a thickness of at least 350 mm, other materials usually result in larger covers. Generally, a uniform modulus of deformation $E_{V2} \geq 45$ MN/m² must be proven on the planum.

Rigofill ST-S

SLW 60/HGV 60

Standard installation under a traffic area



1) At least the same permeability (k_f) as the subsoil for infiltration systems
2) Lower cover upon request

The Rigofill ST-S storage/infiltration module is suitable for traffic loads of up to SLW 60/HGV 60 and therefore also suitable for the construction of systems under parks, greens and car parks. With conventional installation parameters*, depths of cover of D_C 2.3 m and soil depths of D_S 4 m are possible for infiltration systems.

A project-specific stability analysis can be prepared by TRICEL.

* SLW 60, specific weight of soil 19 kN/m³, friction angle 30, mean soil temperature max. 23°C

NB

for HGW over structure soil

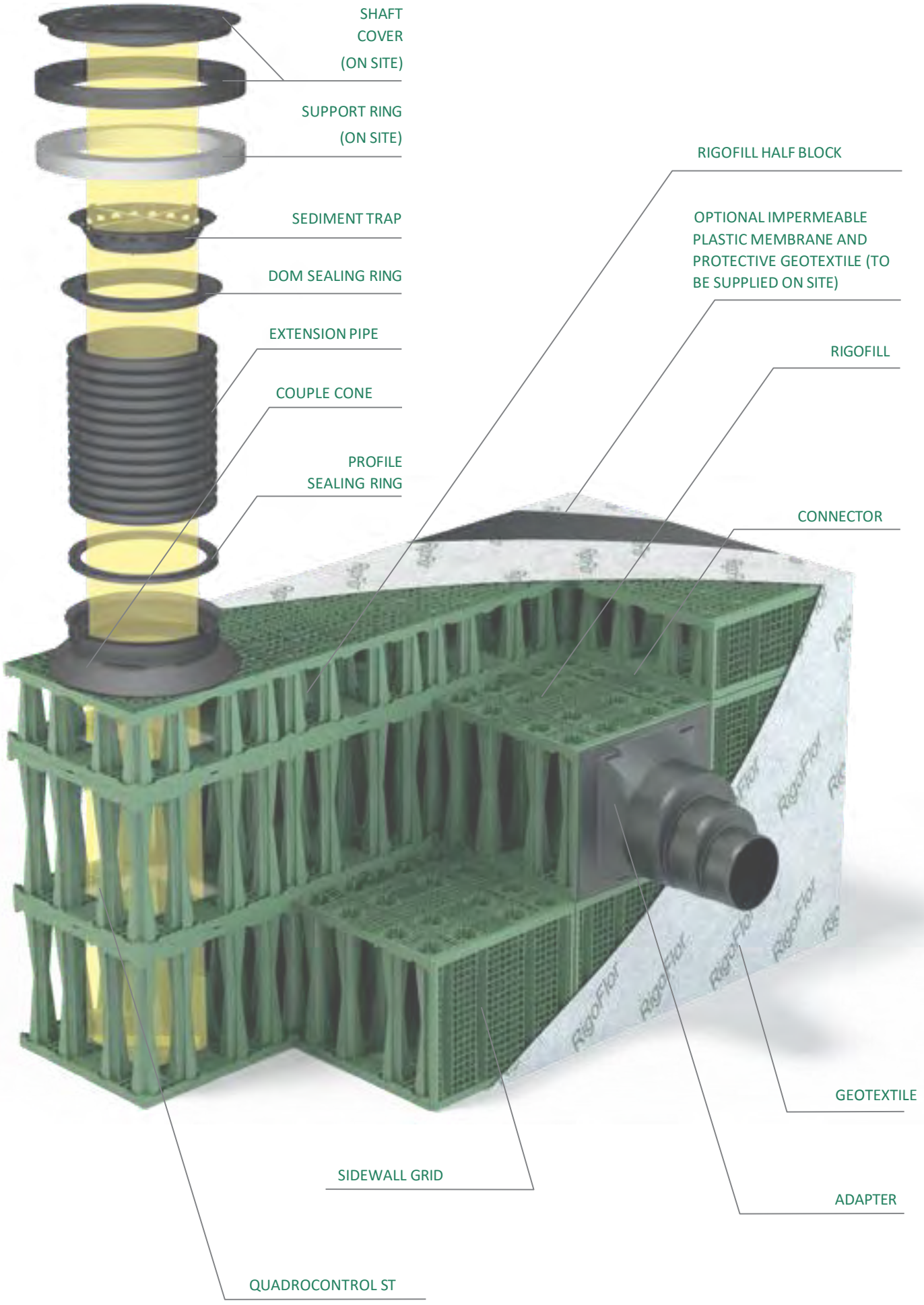
Rigofill ST-S systems, which are used as watertight storage systems with impermeable plastic membrane, have been designed for application above the highest groundwater level (HGW).

High installation depths and use in groundwater are possible under corresponding technical conditions after consultation with TRICEL. (See pages 10–11)

Please contact us.

Please observe the installation manual at tricel.ie and tricel.co.uk

Example – Rigofill ST-S

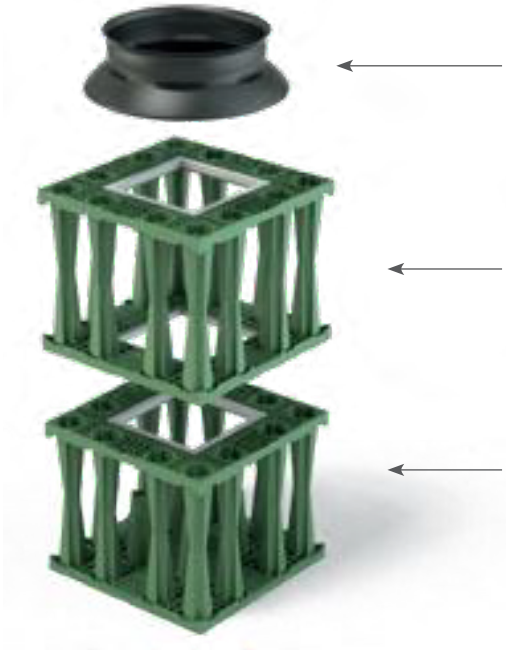

SHAFT COVER (ON SITE)
SUPPORT RING (ON SITE)
SEDIMENT TRAP
DOM SEALING RING
EXTENSION PIPE
COUPLE CONE
PROFILE SEALING RING
RIGOFILL HALF BLOCK
OPTIONAL IMPERMEABLE PLASTIC MEMBRANE AND PROTECTIVE GEOTEXTILE (TO BE SUPPLIED ON SITE)
RIGOFILL
CONNECTOR
GEOTEXTILE
SIDEWALL GRID
ADAPTER
QUADROCONTROL ST

Quadro®Control ST – system shaft

Integrated inspection shafts

QuadroControl ST is a polypropylene inspection shaft which can be integrated in the storage/infiltration system. It is square with a base of 800 x 800 mm and can be used anywhere in the layout. Its height results from the number of layers of the connected storage/infiltration system. The shaft allows comfortable access to the inspection tunnel from above ground. High-performance inspection and flushing equipment can easily be inserted into the inspection tunnel. The shaft is integrated into the storage/infiltration system and grows layer by layer as construction progresses. QuadroControl ST is delivered with all required components and will be assembled on site.

Structure



The shaft cone is the transition to the extension pipe. The length of the extension pipe is chosen depending on the installation depth.

The shaft is integrated into the storage/ infiltration system and grows layer by layer as construction progresses.

The shaft components are stackable, and delivery includes the cone with all required components as shaft package.

Arrangement of inspection shafts

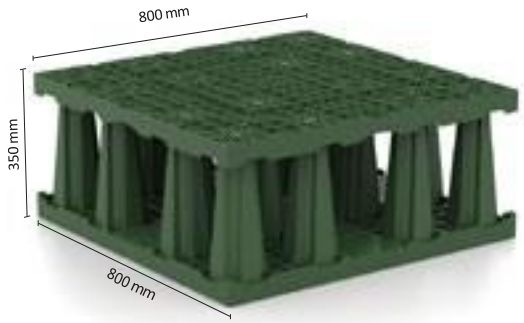
Number of and position in the system are above all determined by the size of the system, access, pipe connections and design of the outdoor facilities.

In order to ensure that flushing of the complete system is possible, each row should comprise at least one inspection shaft. In addition, the shafts should be positioned such that the shaft covers do not interfere with the design of the outdoor facilities, but can easily be accessed by vehicles for maintenance purposes.

Adjacent shafts should be staggered in the layout.

Design-relevant dimensions

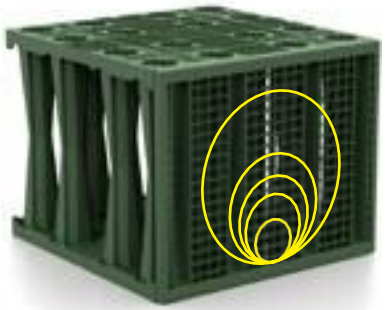
Dimensions



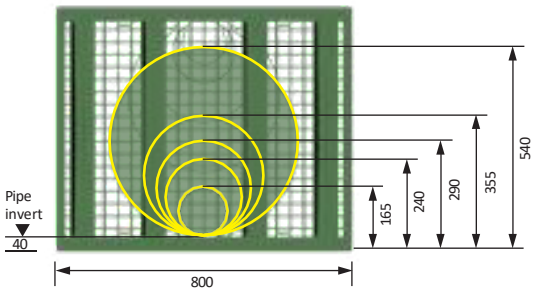
Sidewall grid connection options

Full block connection options

DN/OD 125, 200, 250, 315, 500

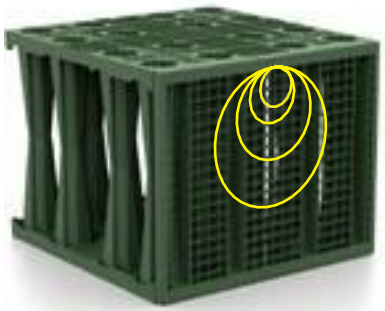


Connections at the top or at the bottom

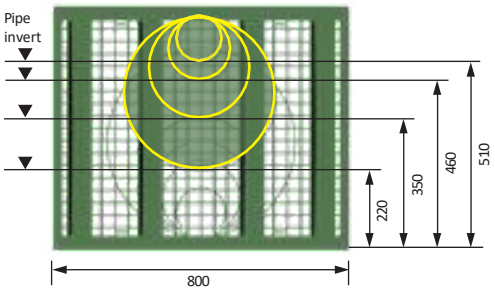


Full block connection options

DN/OD 110, 160, 270, 400

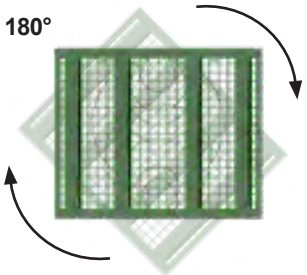


Connections at the top or at the bottom



NB

Generally, sidewall grids can also be installed turned by 180°.

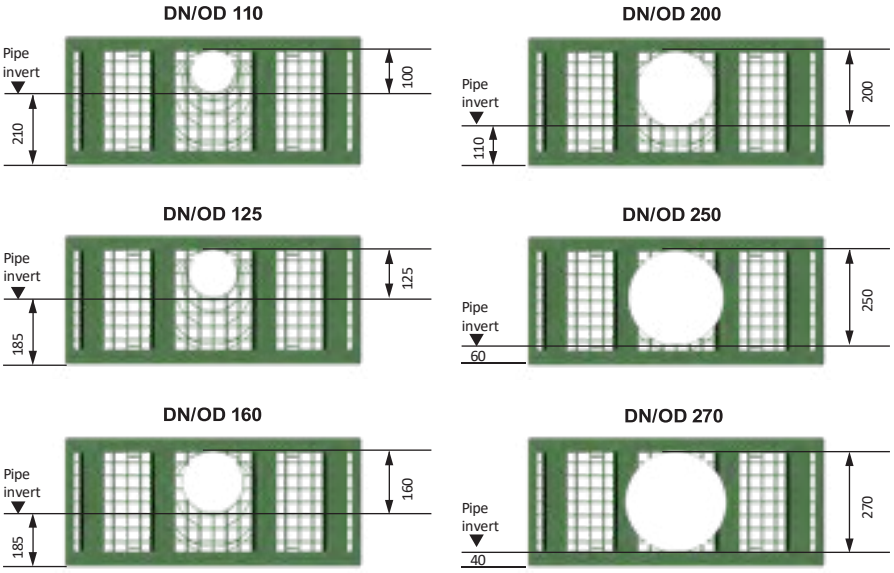


This allows all available nominal diameters to be realised both at the top and the bottom of the module.

Sidewall grid connection options

Half block connection options

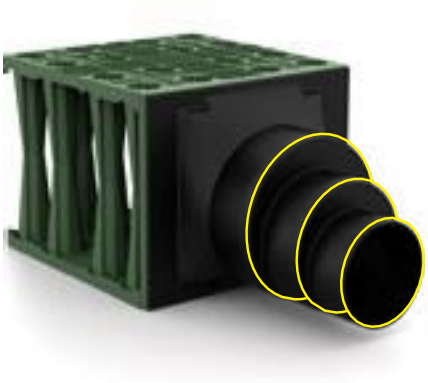
DN/OD 110, 125, 160, 200, 250, 270

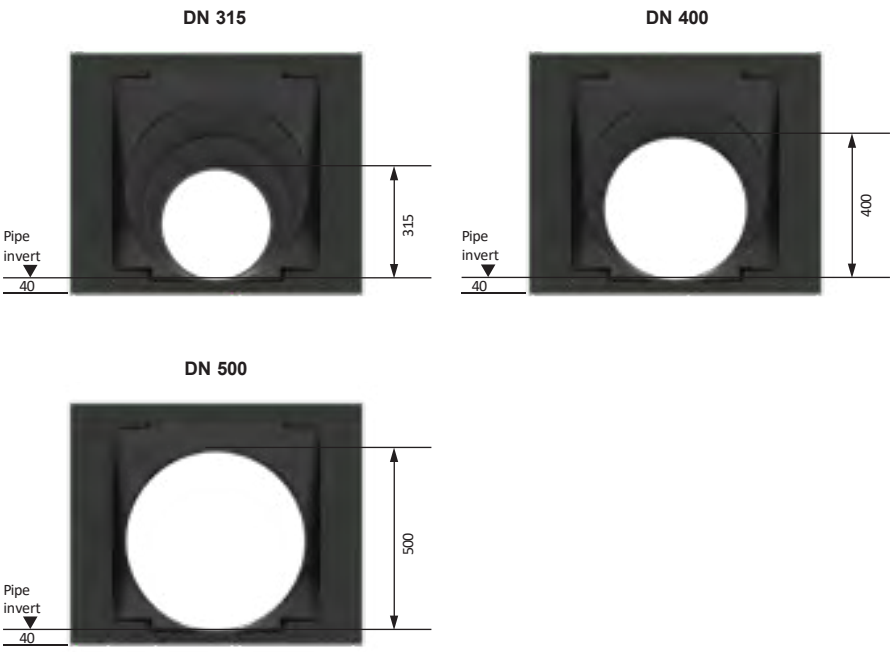


Adapter connection options

Connection options

DN 315, 400, 500

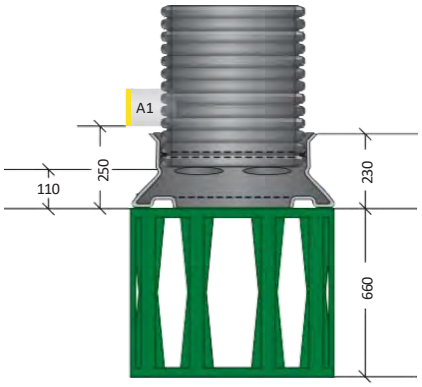




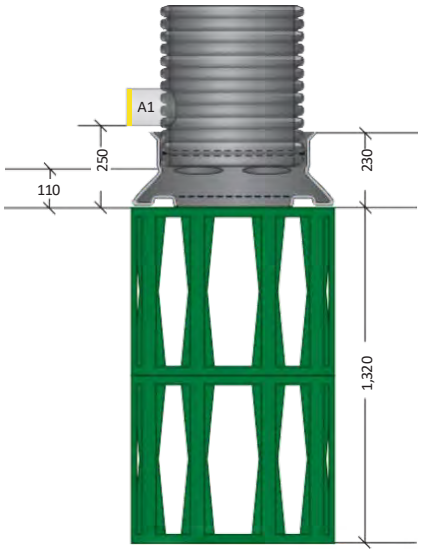
Quadro®Control ST dimensions

Connection options **A1**

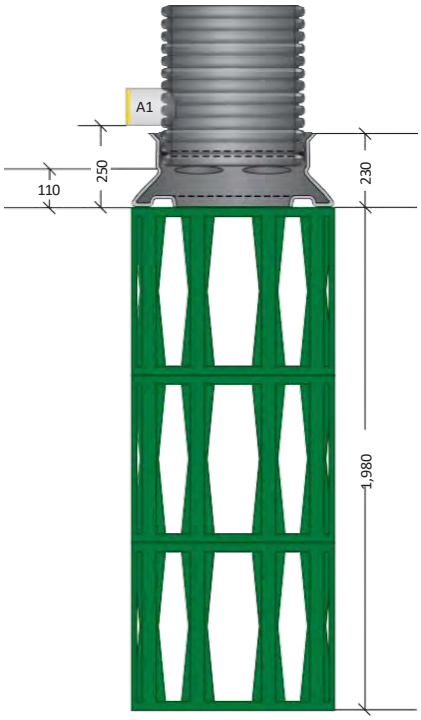
DN/OD 200 or DN/OD 315 connection possible



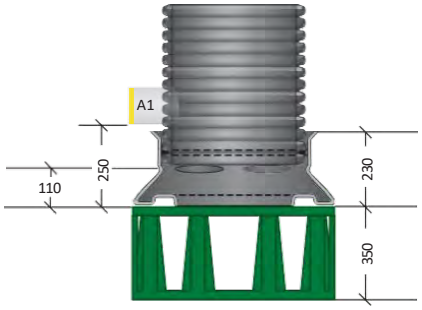
1- layer



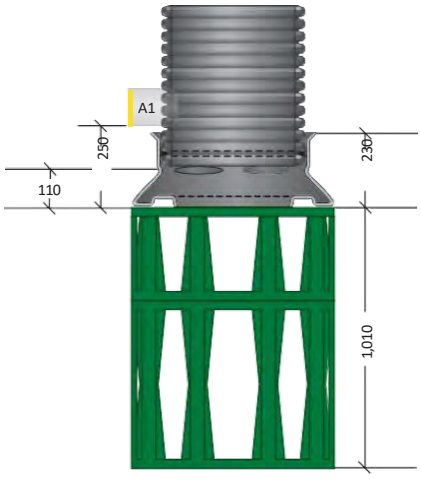
2- layer



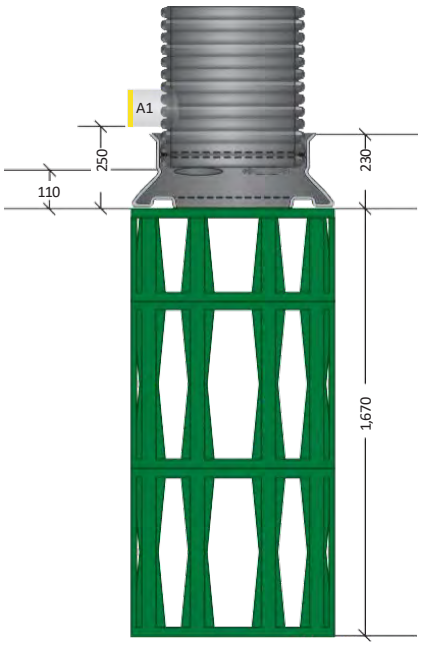
3- layer



1/2-layer



1/2-layer

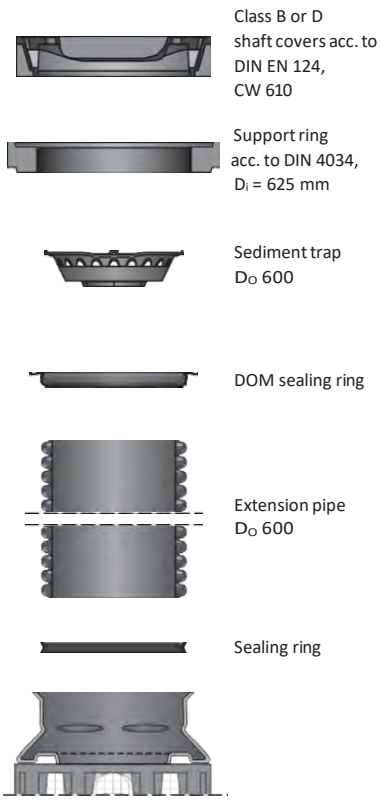


2 1/2-layer

1

Quadro®Control ST shaft structure

Structure for inspection shaft



Class B or D shaft covers acc. to DIN EN 124, CW 610

Support ring acc. to DIN 4034, D_i = 625 mm

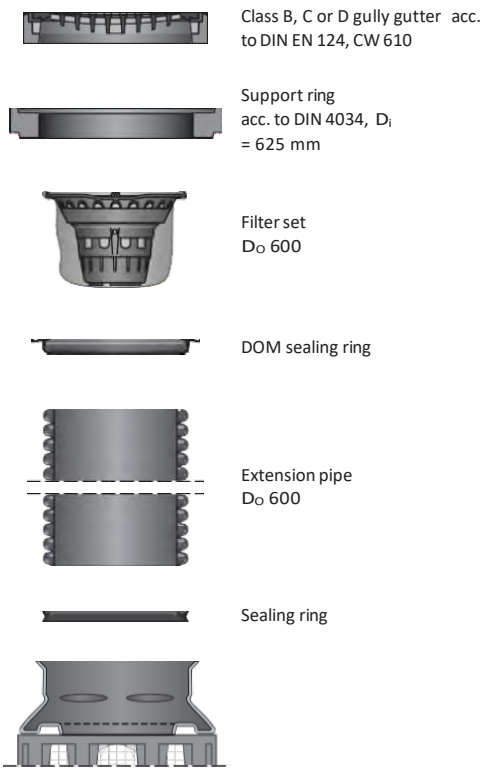
Sediment trap D_O 600

DOM sealing ring

Extension pipe D_O 600

Sealing ring

Structure for swale emergency overflow



Class B, C or D gully gutter acc. to DIN EN 124, CW 610

Support ring acc. to DIN 4034, D_i = 625 mm

Filter set D_O 600

DOM sealing ring

Extension pipe D_O 600

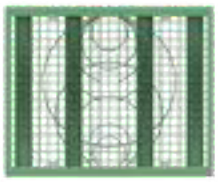
Sealing ring

Rigofill® ST-Advanced – product overview

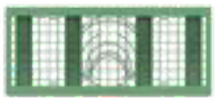
Full block

Half block

Sidewall grid full block



Sidewall grid half block



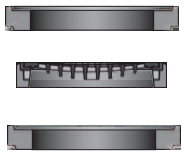
Rigofill ST-A supporting grid

Rigofill ST-A adapter

Single-layer connector

Multiple-layer connector

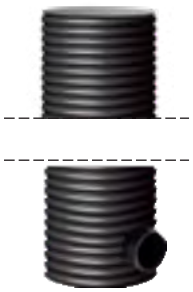
Product	Technical data		
Rigofill ST-A	W x D x H = 800 x 800 x 660 mm 422 l gross volume 406 l storage volume		**51594000**
Rigofill ST-A half block	W x D x H = 800 x 800 x 350 mm 224 l gross volume 212 l storage volume		**51594001**
Rigofill ST-A sidewall grid	W x D x H = 800 x 30 x 660 mm Connections: DN 110, 125, 160, 200, 225, 250, 315, 400, 500		**51994000**
Rigofill ST-A half block sidewall grid	W x D x H = 800 x 30 x 350 mm Connections: DN 110, 125, 160, 200, 225, 250		**51994001**
Rigofill ST-A sidewall grid, short	W x D x H = 770 x 30 x 660 mm Connections: DN 110, 125, 160, 200, 225, 250, 315, 400, 500		**51994010**
Rigofill ST-A sidewall grid half block, short	W x D x H = 770 x 30 x 350 mm Connections: DN 110, 125, 160, 200, 225, 250		**51994011**
Rigofill ST-A supporting grid	for Rigofill ST-A full block W x D x H = 800 x 37.5 x 800 mm		**51994020**
Rigofill ST-A adapter	W x H = 800 x 660 mm Connections: DN 315, 400, 500		**51994003**
Connector single-layer (suitable for single-layer installations)	Requirement for single-row installation	1 pc(s). per module	**51990001**
	Requirement for multiple-row installation	2 pc(s). per module	
Connector multiple-layer (for multiple-layer installations)	Requirement for two-layer installation	1 pc(s). per module	**51990004**
	Requirement for three-layer installation	1.3 pc(s). per module (factor 1.3)	



Product	Technical data	
Shaft covers acc. to DIN EN 124	Class B or D; CW 610	to be ordered/ supplied on site
Gully gutter acc. to DIN EN 124	Class B, C or D; CW 610	
Support ring acc. to DIN 4034, Part 1	Height: 100 mm	

Filter set D_o 600	Swale emergency overflow for shafts D_o 600 comprising dirt trap and geotextile filter bag	**51991002**
Geotextile filter bag D_o 600	Replacement filter set D_o 600	**51991099**

Sediment trap D_o 600	Suitable for installation under CW 610 shaft covers	**51991095**



DOM sealing ring	For extension pipe D_o 600; for sealing to concrete support ring	**51919505**

Extension pipe without inlet	D_o 600; 1 m length	**51550551**
	D_o 600; 2 m length	**51550552**
	D_o 600; 3 m length	**51550553**
	D_o 600; 6 m length	**51550556**

Extension pipe with inlet KG DN 315	D_o 600; 1 m length	**51550531**
	D_o 600; 2 m length	**51550532**
	D_o 600; 3 m length	**51550533**

1/2-layer

QuadroControl ST-A 1/2-layer	WxDxH = 800x800x350 mm [1] incl. couple cone and one profile sealing ring	**51504005**
QuadroControl ST-A 1-layer	WxDxH = 800x800x660 mm [1] incl. couple cone and one profile sealing ring	**51504010**

1 1/2-layer

QuadroControl ST-A 1 1/2-layer	WxDxH = 800x800x1,010 mm [1] incl. couple cone and one profile sealing ring	**51504015**
QuadroControl ST-A 2-layer	WxDxH = 800x800x1,320 mm [1] incl. couple cone and one profile sealing ring	**51504020**
QuadroControl ST-A 2 1/2-layer	WxDxH = 800x800x1,670 mm [1] incl. couple cone and one profile sealing ring	**51504025**
QuadroControl ST-A 3-layer	WxDxH = 800x800x1,980 mm [1] incl. couple cone and one profile sealing ring	**51504030**

QuadroControl ST-A supporting grid	W x D x H = 800 x 37.5 x 800 mm	**51994127**

[1] Plus 230 mm couple cone total height

Rigofill ST-Standard – product overview

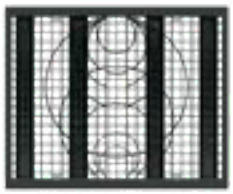
Full block

Product	Technical data		
Rigofill ST-S	W x D x H = 800 x 800 x 660 mm 422 l gross volume 406 l storage volume		**51594200**

Half block

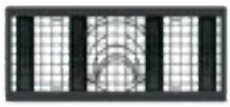
Rigofill ST-S half block	W x D x H = 800 x 800 x 350 mm 224 l gross volume 212 l storage volume		**51594201**

Sidewall grid full block



Rigofill ST-S sidewall grid	W x D x H = 800 x 30 x 660 mm Connections: DN 110, 125, 160, 200, 225, 250, 315, 400, 500		**51994200**
Rigofill ST-S half block sidewall grid	W x D x H = 800 x 30 x 350 mm Connections: DN 110, 125, 160, 200, 225, 250		**51994201**
Rigofill ST-S sidewall grid, short	W x D x H = 770 x 30 x 660 mm Connections: DN 110, 125, 160, 200, 225, 250, 315, 400, 500		**51994210**

Sidewall grid half block



Rigofill ST-S half block sidewall grid, short	W x D x H = 770 x 30 x 350 mm Connections: DN 110, 125, 160, 200, 225, 250		**51994211**

Rigofill ST-S supporting grid

Rigofill ST-S supporting grid	for Rigofill ST-S full block W x D x H = 800 x 37.5 x 800 mm		**51994220**

Adapter

Adapter for Rigofill ST-S	W x H = 800 x 660 mm Connections: DN 315, 400, 500		**51994203**

Single-layer connector

Connector single-layer (suitable for single-layer installations)	Requirement for single-row installation	1 pc(s). per module	**51990001**
	Requirement for multiple-row installation	2 pc(s). per module	

Multiple-layer connector

Connector multiple-layer (for multiple-layer installations)	Requirement for two-layer installation	1 pc(s). per module	**51990004**
	Requirement for three-layer installation	1.3 pc(s). per module (factor 1.3)	

1/2-layer

1 1/2-layer

Product	Technical data	
Shaft covers acc. to DIN EN 124	Class B or D; CW 610	to be ordered/ supplied on site
Gully gutter acc. to DIN EN 124	Class B, C or D; CW 610	
Support ring acc. to DIN 4034, Part 1	Height: 100 mm	
Filter set D_o 600	Swale emergency overflow for shafts D_o 600 comprising dirt trap and geotextile filter bag	**51991002**
Geotextile filter bag D_o 600	Replacement filter set D_o 600	**51991099**
Sediment trap D_o 600	Suitable for installation under CW 610 shaft covers	**51991095**
DOM sealing ring	For extension pipe D_o 600; for sealing to concrete support ring	**51919505**
Extension pipe without inlet	D_o 600; 1 m length	**51550551**
	D_o 600; 2 m length	**51550552**
	D_o 600; 3 m length	**51550553**
	D_o 600; 6 m length	**51550556**
Extension pipe with inlet KG DN 315	D_o 600; 1 m length	**51550531**
	D_o 600; 2 m length	**51550532**
	D_o 600; 3 m length	**51550533**
QuadroControl ST-S 1/2-layer	WxDxH = 800x800x350 mm [1] incl. couple cone and one profile sealing ring	**51504205**
QuadroControl ST-S 1-layer	WxDxH = 800x800x660 mm [1] incl. couple cone and one profile sealing ring	**51504210**
QuadroControl ST-S 1 1/2-layer	WxDxH = 800x800x1,010 mm [1] incl. couple cone and one profile sealing ring	**51504215**
QuadroControl ST-S 2-layer	WxDxH = 800x800x1,320 mm [1] incl. couple cone and one profile sealing ring	**51504220**
QuadroControl ST-S 2 1/2-layer	WxDxH = 800x800x1,670 mm [1] incl. couple cone and one profile sealing ring	**51504225**
Supporting grid QuadroControl ST-S	W x D x H = 800 x 37.5 x 800 mm	**51994128**

[1] Plus 230 mm couple cone total height

Our services

Water · Know-how · Consulting

Any task related to handling stormwater presents individual challenges. Framework conditions of individual projects vary significantly:

- quantity and characteristic of stormwater,
- entry of pollutants from surfaces and the air in the respective area depending on land use,
- geological, hydrogeological conditions,
- aspects of urban development and landscaping

to name but a few considerations which must be made beforehand.

Relevant standards and provisions must be observed when planning and dimensioning storage/infiltration systems.

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- Installation manual
- Price list
- Tender documents

www.tricel.ie/stormwater
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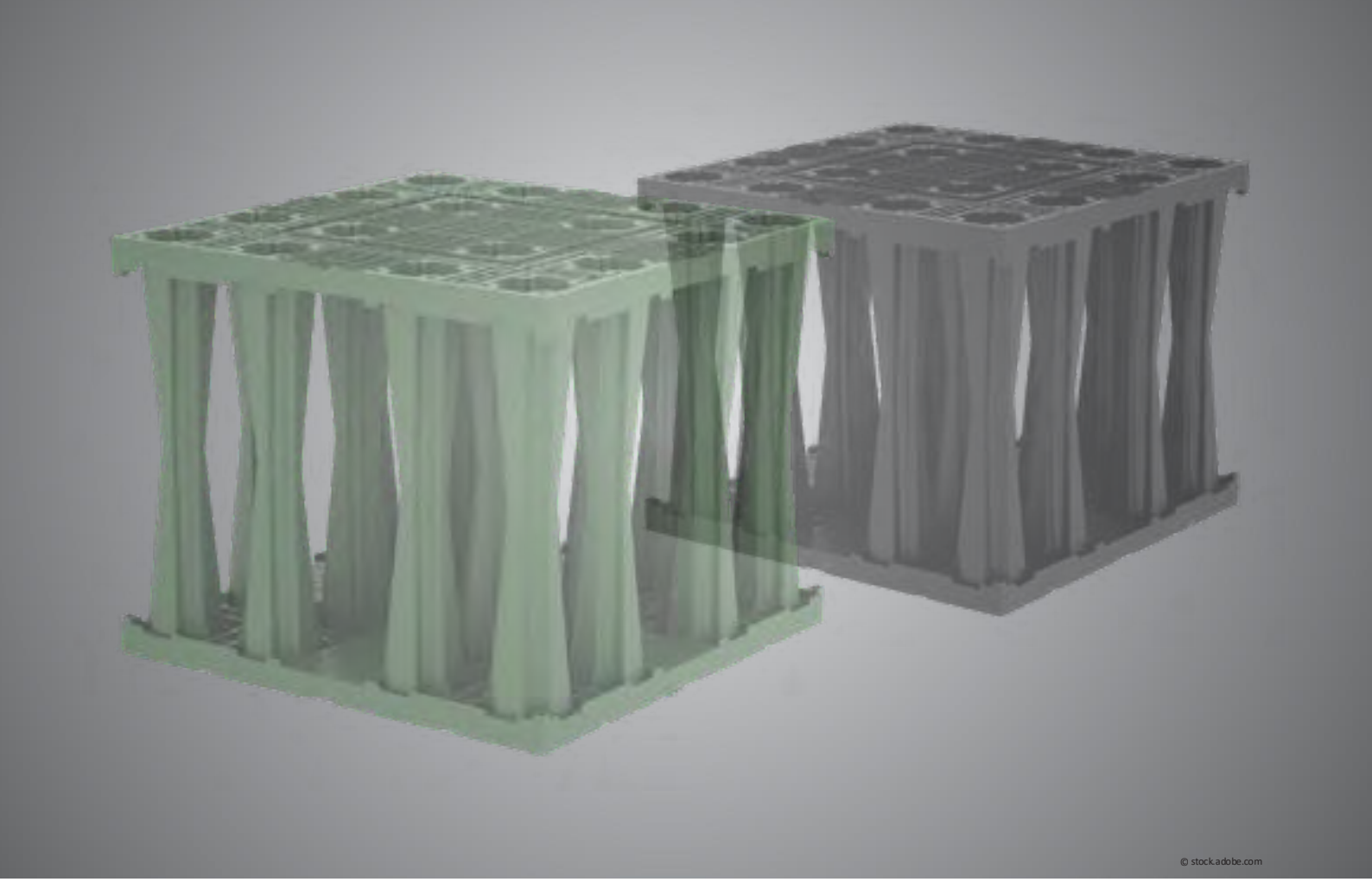

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GENERATIONS OF INNOVATION

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1429745/3 – April 2026