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Installation and maintenance instructions
GRAF Rain Bloc 300

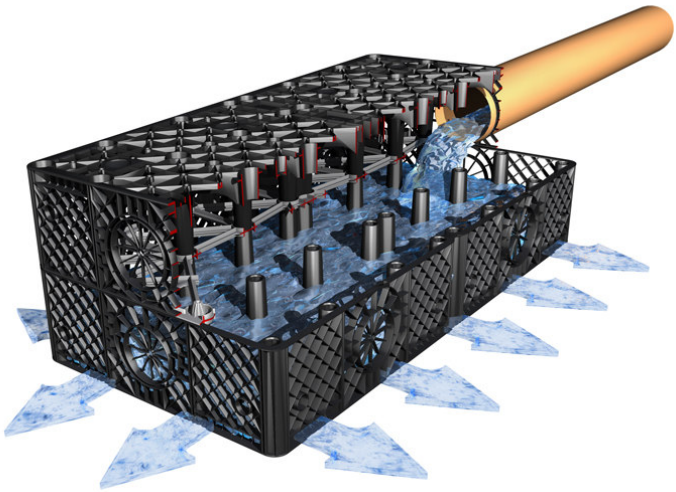
Rain Bloc lorry bearing
Order No. 360014

Rain Bloc lorry bearing inspect
Order No. 360015

Accessories:

Connecting elements (10 units)
Order No. 369012

Geotextile (per m., roll width 5 m)
Order No. 231002



The points described in these instructions must be observed under all circumstances. All warranty rights are invalidated in the event of non-observance. Separate installation instructions are enclosed in the transportation packaging for all additional articles purchased from GRAF.

Missing instructions must be requested from us immediately.

The components must be checked for any damage prior to insertion into the trench under all circumstances.

Missing instructions can be downloaded on www.graf.info or can be requested from GRAF.

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1. General notes

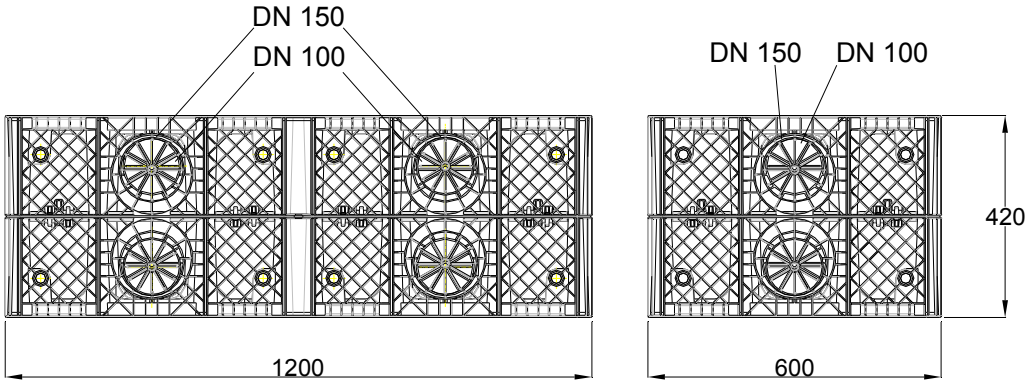
1.1 Security

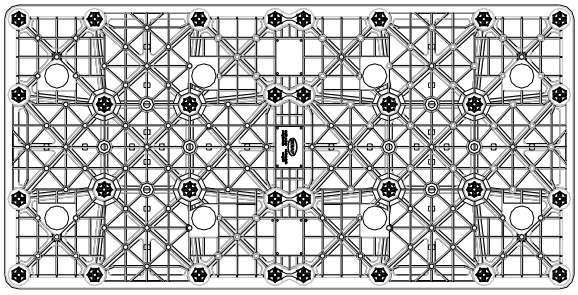
The relevant accident prevention regulations according to national standards must be observed during all work.

The relevant regulations and standards must additionally be taken into consideration during installation, assembly, servicing, repair, etc.

GRAF offers an extensive range of accessories, all of which are designed to match each other and which can be extended to form complete systems. The use of accessories that have not been approved by GRAF results in the exclusion of the warranty/guarantee.

2. Technical data





Volume	Gross 300 Litre / Net 285 Litre	
Measurements	1200 x 600 x 420 mm (L x W x H)	
Connections	DN 150 (12x)	
	DN 125 (6x)	
	DN 100 (6x)	
Weight	Rain Bloc vehicle loading:	16 kg
	Rain Bloc vehicle loading PKW inspect:	17 kg
	Rain Bloc lorry bearing:	18 kg
	Rain Bloc lorry bearing inspect:	19 kg
Material	100 % Polypropylene (PP) Recycling materials	

3. Installation conditions

3.1 Choice of location:

- Distance from basement > 6 m
- Distance from ground water minimum > 1 m
- The distance from the existing or planned trees must be at least the expected spread of the trees crown.

3.2 Excavation dimensions

The measurements of the excavation is in accordance with the number of drainage blocks to be installed by multiplying the length and width dimensions.

The following table gives the required earth covering and the maximum installation depth to the lower edge of the blind drain:

Transportation loads		**Rain Bloc lorry bearing**	**Rain Bloc lorry bearing / inspect**
Short-term		max. 100 kN/m²	max. 100 kN/m²
Long-term		max. 59 kN/m²	max. 59 kN/m²
Vehicle / Without traffic load	min. earth covering*	250 mm	250 mm
	max. earth covering	2750 mm	2750 mm
	max. installation depth*	5000 mm	5000 mm
	max. layers	10	10
Lorry 12	min. earth covering*	500 mm	500 mm
	max. earth covering	2750 mm	2750 mm
	max. installation depth*	5000 mm	5000 mm
	max. layers	10	10
Lorry 30	min. earth covering*	500 mm	500 mm
	max. earth covering	2500 mm	2500 mm
	max. installation depth*	5000 mm	5000 mm
	max. layers	10	10
Lorry 40	min. earth covering*	500 mm	500 mm
	max. earth covering	2250 mm	2250 mm
	max. installation depth*	5000 mm	5000 mm
	max. layers	10	10
Lorry 60	min. earth covering*	500 mm	500 mm
	max. earth covering	2000 mm	2000 mm
	max. installation depth*	5000 mm	5000 mm
	max. layers	10	10

* The max. installation depth or min. earth covering is related to the ground substance with an inside angle of friction from $\varphi \geq 40{,}0°$

4. Installation

4.1 Connecting the inlet and venting pipes

To connect the inlet and venting piping there are prepared positions for the openings to be cut out of the plastic ribbing. The pipes must extend at least 20 cm into the module. Should an installation over a wider area be proposed, then there must also be an appropriately greater number of inlet pipes to ensure an even distribution of the water.

4.2 Installation of the drainage blocks

The geotextile must be laid out in the excavation that has an even bottom surface with an overlap of not less than 30-50 cm. The modules are then positioned on the geo-textile (only laying down, never in the standing position) and all fastened together with the fastening pieces. For fastening lengthwise as well as widthwise, at least two fastening pins are required in each direction. When the system is to be built in several levels, then the individual layers must be arranged both lengthwise and crosswise (widthwise) to one another to ensure a stable interconnection. Before filling, the module must be completely wrapped in the Geo-textile and special attention must be paid to ensure that all the ends and edges of each fleece roll overlap by at least 30-50 cm. To conclude the installation, the excavation is evenly backfilled and compacted.

The terrain of the ground surface and substructure should be the expected load to be prepared. If it is intended that grass should be sown over the GRAF drainage blocks, then a heavy duty plastic sheeting should first be laid over the drainage blocks and this then covered by an approximately 10 cm thick layer of clay otherwise the grass will dry out too quickly.

If the Rain Blocs are used for the infiltration of treated wastewater, no fleece should be used on the ground area. The Rain Blocs can be installed directly on a 8-10 cm thick subbase of gravel 2/8 mm. For this application, only single-layers and single-rows should be installed.