

Recommended grass grid

The grass grid system shall be pre-fabricated proprietary product with at least 2 years warranty by the manufacturer.

The loading of the system should be not less than 250t per square metre in accordance to Din 53454 and a compressive load testing in accordance to EN ISO 604:2003 should has to be shown.

- The grass grid, green should be manufactured from 100% recycled polyethylene and provided lightweight ground reinforcement system.
- The system shall be ultra violet- and water proof and be over 90% porous, reducing the rate of surface water run-off.
- The Design shall be “Florentine Design” and the installation of each unit/ tile shall be easy handled with clip-together fixings.
- Dimensions of the grass grid units shall be 580x390x38 mm, weight 4.5kg/ m2 and color dark green

The whole system shall be provided by a single manufacturer.

The contractor has to install the grass grid according to the manufacturers proposal. For the installation within cement pavers or similar material an expansion gap of 1cm at the kerb stone has to be provided.

Recommended specification of polymer concrete V-shape channel with mesh grating

Proprietary polyester resin concrete channel with V-shape profile
“ACO Multiline “, item ref. V200, with 1% invert fall from 265mm to 365mm, with cast-in steel edge-rail

Channel Body Type	H (B) mm	H (E) mm	Description
0.0	265	265	without fall
1CN	265	275	1% fall
2CN	275	285	1% fall
3CN	285	295	1% fall
4CN	295	305	1% fall
5CN	305	315	1% fall
6CN	315	325	1% fall
7CN	325	335	1% fall
8CN	335	345	1% fall
9CN	345	355	1% fall
10CN	355	365	1% fall
20.0	365	365	without fall

500mm/ 1000mm nominal length; completed with grade 304 stainless steel mesh grating, MW. Channel body and grating withstand loading to BS EN1433 D400 (40t) bedded in concrete/ on recess with cement mortar; all in accordance with manufacturer’s installation instruction.

Technical data of Polymer concrete channel:

Flexural strength:	not less than 22 N/mm ²
Compressive Strength:	not less than 90 N/mm ²
Modulus of elasticity:	Around 25 KN/mm ²
Density:	2.1 – 2.3 g/cm ²
Penetration depth of water:	0 mm
Roughness depth:	approx. 25 µm
Roughness coefficient (Manning):	0.011 (average)

The drainage channel system shall be pre-fabricated proprietary products with at least 2 years warranty by the manufacturer.

The manufacturer shall provide calculation demonstration to guarantee the workability of the whole system.

The whole system including channel, edge rail and slot frame shall be provided by single manufacturer.

Recommended specification of polymer concrete V-shape channel with ductile iron grating

Proprietary polyester resin concrete channel with V-shape profile
“ACO Multiline “, item ref. V200, with 1% invert fall from 265mm to 365mm and cast-in ductile iron edge-rail.

Channel Body Type	H (B) mm	H (E) mm	Description
0.0	265	265	without fall
1CN	265	275	1% fall
2CN	275	285	1% fall
3CN	285	295	1% fall
4CN	295	305	1% fall
5CN	305	315	1% fall
6CN	315	325	1% fall
7CN	325	335	1% fall
8CN	335	345	1% fall
9CN	345	355	1% fall
10CN	355	365	1% fall
20.0	365	365	without fall

500mm/ 1000mm nominal length; completed with ductile iron grating, slotted design. Channel body and grating withstand loading to BS EN1433 D400 (40t) bedded in concrete/ on recess with cement mortar; all in accordance with manufacturer’s installation instruction.

Technical data of Polymer concrete channel:

Flexural strength:	not less than 22 N/mm ²
Compressive Strength:	not less than 90 N/mm ²
Modulus of elasticity:	Around 25 KN/mm ²
Density:	2.1 – 2.3 g/cm ²
Penetration depth of water:	0 mm
Roughness depth:	approx. 25 µm
Roughness coefficient (Manning):	0.011 (average)

The drainage channel system shall be pre-fabricated proprietary products with at least 2 years warranty by the manufacturer.

The manufacturer shall provide calculation demonstration to guarantee the workability of the whole system.

The whole system including channel, edge rail and slot frame shall be provided by single manufacturer.

Recommended specification of stainless steel shower channel with design grating

The drainage system shall be pre-fabricated proprietary products with at least 2 years warranty by the manufacturer. The manufacturer shall provide calculation demonstrating and to guarantee the workability of the whole drainage system in according to the site conditions. The whole drainage system shall be certified for load capacity and outflow capacity in accordance with EN 1253.

The shower channel shall be made of stainless steel material grade 304, with a lateral gradient and a surrounding connecting rim for thin bed mortar sealing to guarantee an absolutely safe installation of the shower channel.

The drain socket shall be central DN50 suitable for all push-in pipe bell systems with a removable foul air trap, 80mm water seal for hygienically and easily cleaning.

The shower trays and associated grates shall be electro polished at the factory. In electro polishing, the surface is gently refined and due to this glossy appearance provides a minimum of maintenance requirements, water and soap effortlessly remove corrosion from the grating and tray due to the polished and non-porous surface.

The runoff coefficient shall not be less than 0.4l/s so that shower tray could be even used to drain wastewater of far more powerful fittings.

Number of drain bodies	Over-fill height		
	0 mm	5mm	15mm
1 units	0.4l/s	0.5l/s	0.6l/s
2 units	0.7l/s	0.8l/s	1.0l/s
3 units	1.0l/s	1.25l/s	1.4l/s

The shower channel shall be is screwed to the base floor. If the floor is raised, the shower should be adjusted to the required height.

The internal channel width shall be 84 mm and external channel width 144mm (including thin bed flange).

The channel length shall be...

The design of grating shall be ...

The whole system including channel and grating shall be provided by ACO, Germany or a well known, single manufacturer, which is subject to Engineer's approval.

Recommended specification of polymer concrete V-shape slot Channel

Proprietary polyester resin concrete channel with V-shape profile
“Multiline/Brickslot”, item ref. V200, with 1% stepped invert level from 265mm to 365mm; 500mm/ 1000mm nominal length; completed with grade 316 stainless steel angle cover frame to form 13mm wide near continuous inlet slot; finished on top with granite tiles (tiles measured separately), withstand loading to BS EN1433 class C250/ D400 bedded in concrete/ on a recess with cement mortar; all in accordance with manufacturer’s installation instruction