

Stormwater Pipes - Plastream® Composite Drainage Pipe

Plastream® Composite Drainage Pipe

Plastream® composite drainage pipe combines the advantages of a smooth PE bore with the structural strength of steel. Plastream® composite drainage pipe is one of the strongest long-term HDPE pipe products available.

The steel reinforcement is fully encapsulated within the UV-stabilised polyethylene pipe wall, allowing the manufacture of robust, lightweight pipes with high stiffness. Plastream® composite drainage pipe conforms to the requirements of AS2566.1. The installed design is performed to AS/NZS2566.1 and installation to AS/NZS2566.2.

- Lightweight
- Effective long haul costs
- Long term life cycle
- Resistant to creep
- Strong, trafficable
- Flexible
- Abrasion resistant
- Chemical resistant

Assembly is simple, using the built-in spigot joint. Pipes up to 900mm diameter are fitted with a rubber ring gasket to form a silt-tight joint. Diameters above 900mm are supplied with plain socket and spigot, without rubber ring gasket. Cost-effective system for new pipelines or connection to existing systems, agricultural drainage, road culverts, ducting, and connecting to precast structures.

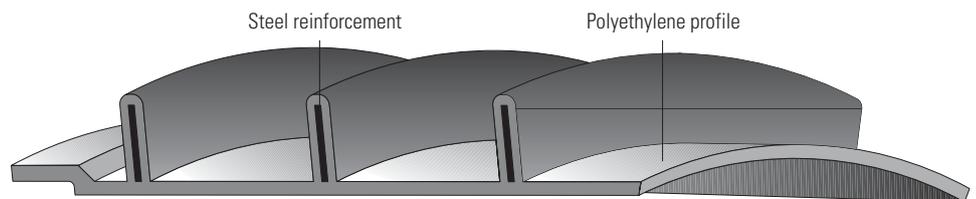
Contact Rocla for design charts and technical information.

Standard Dimensions

| Nominal ID (mm) | Nominal OD (mm) | Length (m) | Mass (kg/pipe) |
|-----------------|-----------------|------------|----------------|
| 225 | 265 | 6 | 25 |
| 300 | 340 | 6 | 35 |
| 375 | 415 | 6 | 45 |
| 450 | 490 | 6 | 55 |
| 525 | 565 | 6 | 70 |
| 600 | 640 | 6 | 80 |
| 675 | 715 | 6 | 110 |
| 750 | 790 | 6 | 120 |
| 825 | 865 | 6 | 160 |
| 900 | 940 | 6 | 180 |
| 1050 | 1098 | 6 | 250 |
| 1200 | 1248 | 6 | 290 |
| 1350 | 1398 | 6 | 340 |
| 1500 | 1580 | 6 | 430 |
| 1650 | 1730 | 6 | 480 |
| 1800 | 1880 | 6 | 690 |
| 1950 | 2030 | 6 | 740 |
| 2250 | 2330 | 6 | 860 |



Typical Profile Cross-section



Plastream® Standard Pipe Fittings*

| Bends | Junctions & Tees | Reducers |
|------------|------------------|----------|
| 90 degrees | 100 branch | 100 |
| 45 degrees | 150 branch | 150 |
| | 225 branch | 225 |
| | 300 branch | 300 |
| | 375 branch | 375 |
| | 450 branch | 450 |
| | | 525 |

* To suit diameters up to 900mm. Custom fittings available on request.

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Plastream® Composite Drainage Pipe Installation

Installation and jointing of Plastream® pipes should be carried out in accordance with the project specifications and AS/NZS2566.2.

Trench preparation

Trenches should be as narrow as practical, with enough space to allow compaction of the fill at the sides and under the haunches of the pipe. The bedding surface should be smooth along the full length of the pipeline. The depth of the bedding ranges from 100 to 150mm depending on the pipe diameter.

Tips

- 1 One or two people will provide sufficient force to assemble the joint on smaller sizes.
- 2 For pipes larger than 450mm diameter, push the pipe home by levering with a crowbar against a piece of timber at the uphill face of the pipe (see diagram).
- 3 Less force is required to push home the RRJ if the uphill end of the pipe is elevated slightly so that not all of the gasket is compressed at once.
- 4 Take care not to damage the rubber joiner or socket, to ensure proper sealing.



Installation Guidelines

Plastream® composite drainage pipes in sizes 225mm to 900mm are supplied with a rubber ring joiner (RRJ). Diameters above 900mm are supplied with a standard extruded joiner.

RRJ pipes can be assembled in the trench quickly and simply using the following method:

- 1 Pipe laying to start at the downhill end of the pipeline with the RRJ end facing downhill. Ensure pipes are laid to line and grade along the centre line of the trench.
- 2 Stretch the supplied gasket over the joiner into the slot provided, ensuring the gasket lead-in is pointing down hill (see diagram).
- 3 Using a clean cloth, remove dust and any debris from joiner, gasket and internal surface of the pipe.
- 4 Apply jointing lubricant (AS4020-1999) liberally to the gasket and the inside surface of the downhill pipe. Jointing lubricant is not supplied with pipes, but may be purchased on request.
- 5 Lift the pipe slightly above the ground to force the joiner and gasket inside the end of the downhill pipe to complete the joint. The gasket is made of synthetic rubber and is resistant to acid and salinity.

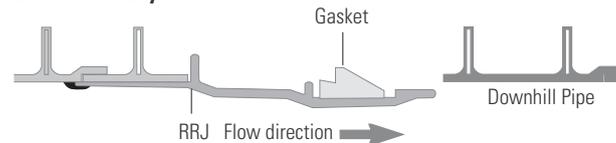
Anchor blocks

Where the slope of the pipeline exceeds 15%, concrete anchor blocks should be cast around the pipe to adequately restrain it. These blocks should key into the solid walls and base of the trench.

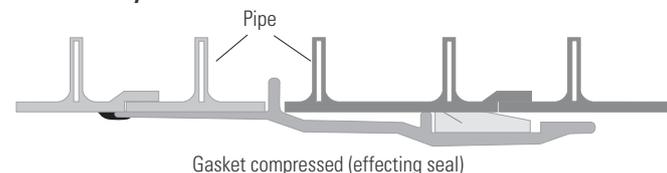
RRJ Pipe Joint

Pipes from 225mm to 900mm diameter are supplied with a rubber ring joiner (RRJ).

Before assembly



After assembly



Flush Joint

Pipes above 900mm diameter are supplied with a standard extruded joiner and jointed on site with industrial sealant.



Levering larger pipes

Stormwater Pipes - SRC

Rocla Plastream® Slotted Pipe

Rocla Plastream® drainage pipe is a perforated pipe (steel-reinforced polypropylene) which can be used for a variety of drainage applications.

The rectangular slots in the pipe walls (dimensions 3mm x 9mm) are located approximately 21mm apart, providing a total perforated area of 2.1%.

The even distribution of the rectangular profile slots around the pipe allows for uniform outflow of water, reducing the possibility of differential movement of the surrounding soil from uneven moisture content.

The ribbed pipe wall configuration combined with the small perforations prevents large soil particles from entering the pipeline. In sandy or fine soil conditions geotextile fabric may be required.

Plastream® slotted pipes can be used for a variety of applications including:

- Groundwater control behind large retaining walls
- Maintenance of high groundwater levels
- Infiltration and ex-filtration transfer in WSUD systems
- Drainage of turf in sports arenas
- Collection of leachate in contaminated sites

Contact Rocla for more specific information, including:

- Plastream® Pipe Technical Manual
- Plastream® Pipe Installation Manuals

Rocla Plastream® Slotted Drainage Pipe – Standard dimensions

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|-----------------|-----------------|------------|----------------|
| 225 | 265 | 6 | 25 |
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| 375 | 415 | 6 | 45 |
| 450 | 490 | 6 | 55 |
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