DESIGN TOOLBOX

CIRTEX ADVANCED DESIGN SOLUTIONS

STORMWATER MANAGEMENT

Designing with **RainSmart®** Stormwater System

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DESIGN TOOLBOX

CIRTEX ADVANCED DESIGN SOLUTIONS

Superior subsurface stormwater system for infiltration, retention and detention.

4. Data input sheet for RainSmart
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8. RainSmart specification sheet
9. CAD details and drawings
10. Support documentation
11. Project design options

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STORMWATER
DESIGN

DATA INPUT SHEET FOR RAINSMART

PROJECT DETAILS	CONTACT DETAILS	DATE
Project Name:	Company:	
Project No.:	Engineer/Contractor:	
Location:	Ph:	
Client:	Email:	

REQUEST
(Please explain your requirements)

DESIGN LEVEL

Choose your preferred design level ✓

Level 1 (Technical Support) ☐	Level 2 (Project Concepts) ☐	Level 3 (3rd Party Design Cost TBD) ☐

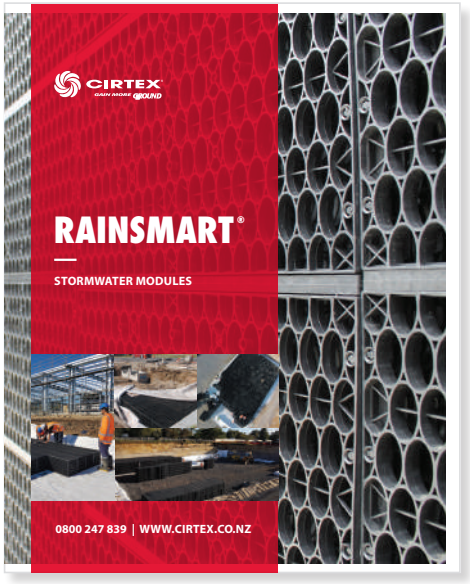
Project details and site constraints	If you require Cirtex to calculate volumes please advise...
Do you wish to retain water or is the objective to allow soakage?	Catchment area (define units):
What is the total volume of water to be stored/soaked away?	Site runoff coefficients:
What is the soakage rate?	Rainfall intensities (if not defined Cirtex will use HIRDS):
How strong is the underlying soil?	Design Storm ARI:
Site configuration (attach plan or draw sketch)	**Sketch**
Site constraints:	
Manhole locations:	
Utilities:	

PRODUCT INFORMATION

For comprehensive product information on RainSmart.
Phone **0800 CIRTEX (247 839)** email **INFO@CIRTEX.CO.NZ**
or visit **WWW.CIRTEX.CO.NZ.**

BENEFITS OF RAINSMART

- Efficient use of space
- Pre-approval from major councils
- Suitable for traffic loads
- Extensive NZ experience
- Unique linear access flushing system
- Versatile design & configuration options
- Nationwide stock holdings

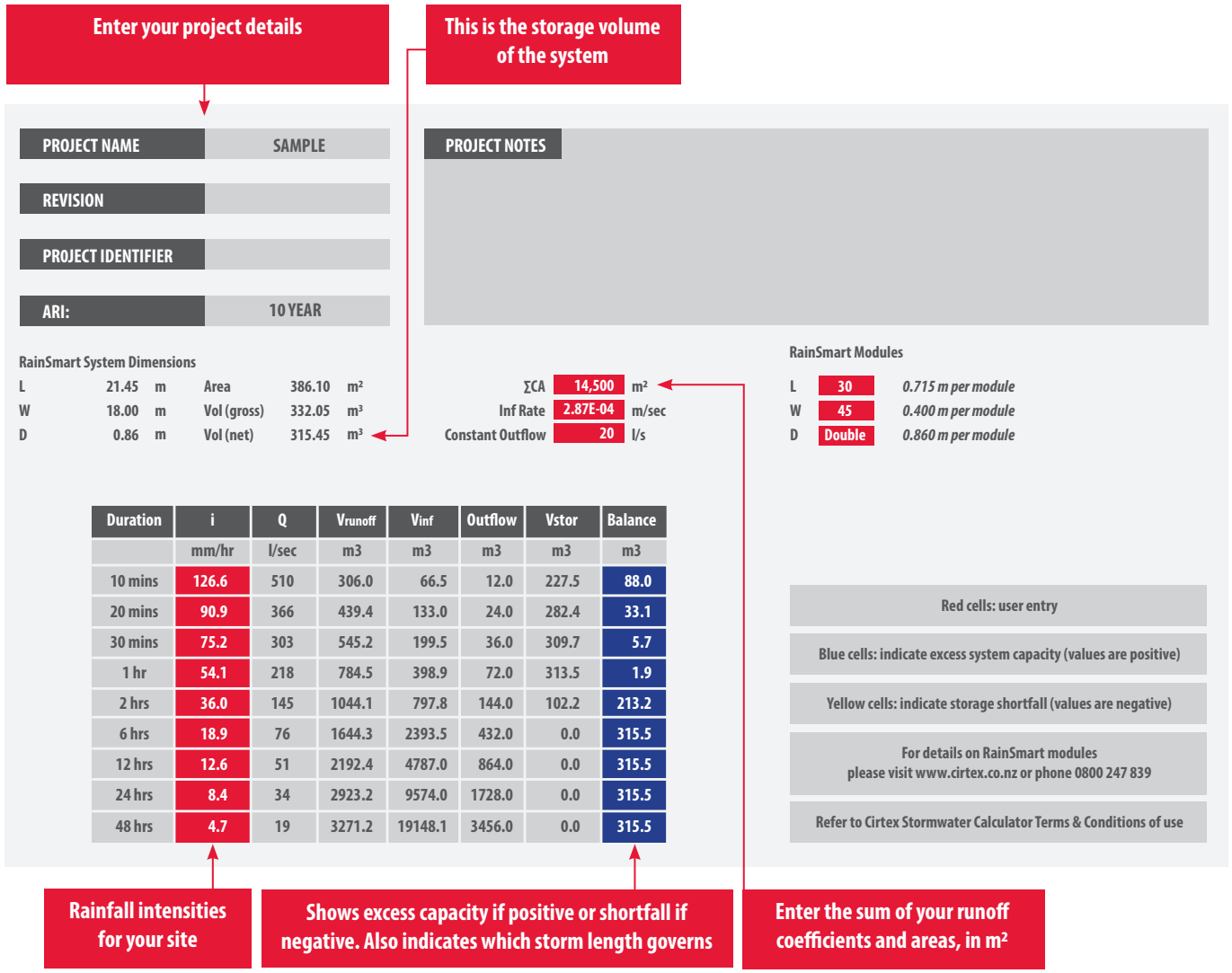


DESIGN ASSISTANCE FOR RAINSMART SYSTEMS

Cirtex has developed a design calculator for RainSmart Systems, ideal for undertaking sensitivity analysis on your site with varying soakage rates, constant outflow rates and exploring different system sizes.

The example shown gives an indication of how to use this handy tool.

Please phone **0800 CIRTEX (247 839)** for a copy or email **INFO@CIRTEX.CO.NZ**.

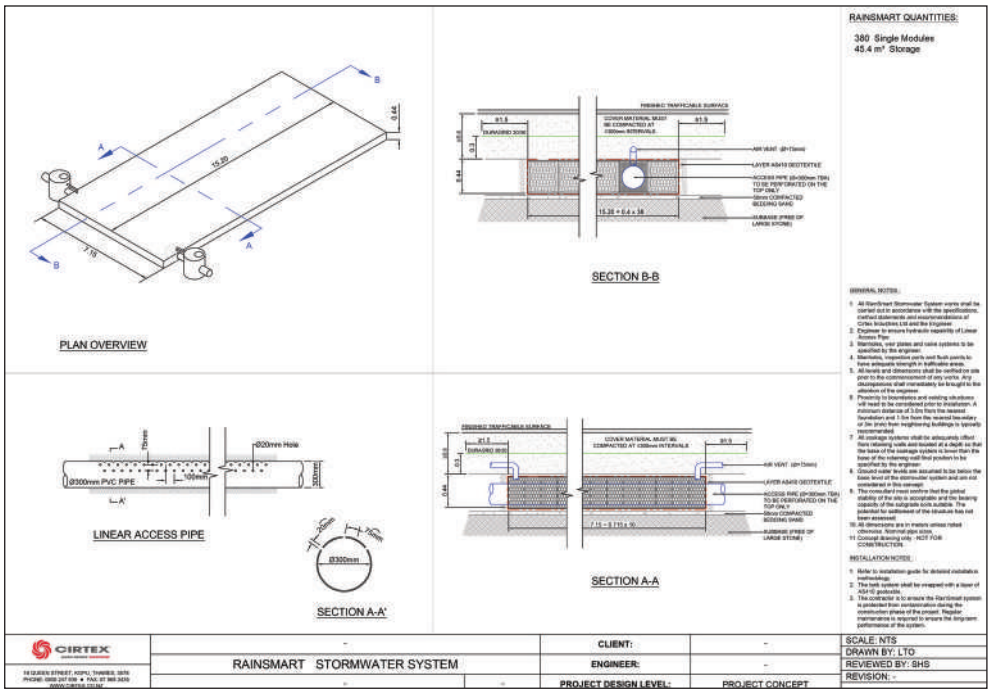


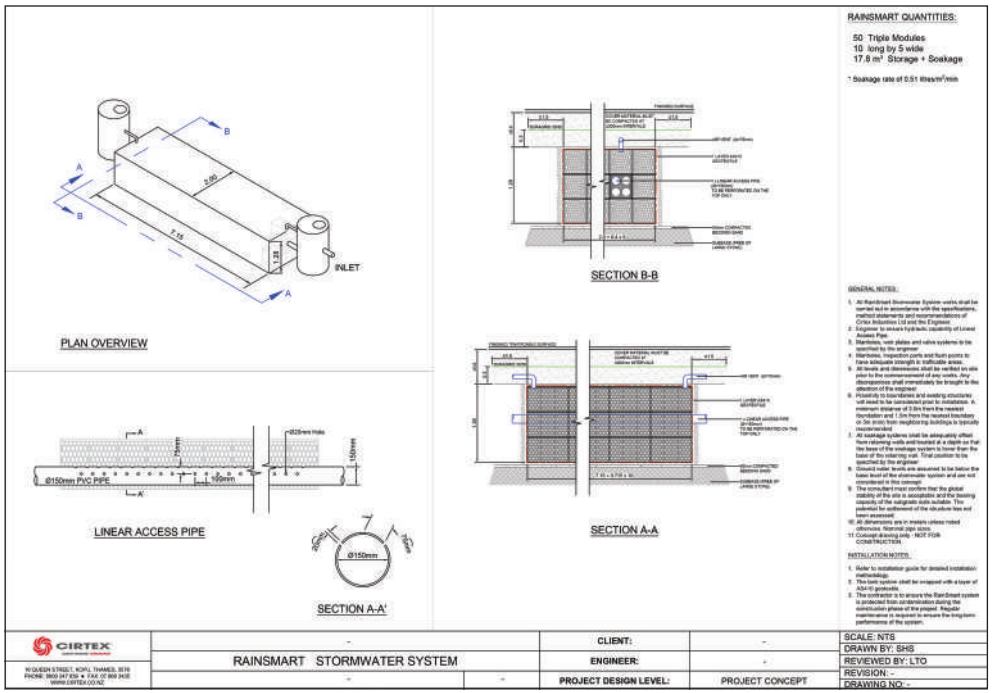
Duration	i	Q	Vrunoff	Vinf	Outflow	Vstor	Balance
	mm/hr	l/sec	m3	m3	m3	m3	m3
10 mins	126.6	510	306.0	66.5	12.0	227.5	88.0
20 mins	90.9	366	439.4	133.0	24.0	282.4	33.1
30 mins	75.2	303	545.2	199.5	36.0	309.7	5.7
1 hr	54.1	218	784.5	398.9	72.0	313.5	1.9
2 hrs	36.0	145	1044.1	797.8	144.0	102.2	213.2
6 hrs	18.9	76	1644.3	2393.5	432.0	0.0	315.5
12 hrs	12.6	51	2192.4	4787.0	864.0	0.0	315.5
24 hrs	8.4	34	2923.2	9574.0	1728.0	0.0	315.5
48 hrs	4.7	19	3271.2	19148.1	3456.0	0.0	315.5

PROJECT DESIGN OUTPUT

Whether you require a simple sketch or a comprehensive presentation, Cirtex can prepare a proposal for your project covering all the key design requirements including the presentation to your client.

Here are some examples of projects we have submitted previously, either use one of our typical plans and calculator to prepare your report, or let Cirtex undertake this for you.





SAMPLE PLAN

Typical of what Cirtex would supply you with for your RainSmart project.

RAINSMART SPECIFICATIONS

GENERAL SPECIFICATION GUIDE

A) DIMENSION
Overall module dimension has been given in the table shown.

B) STORAGE VOLUME
Overall void and water storage volume.

C) PHYSICAL & CHEMICAL CHARACTERISTIC
Modules are manufactured from selected recycled material and have a 15% proprietary mix added.

For a full specification sheet for RainSmart modules please email **INFO@CIRTEX.CO.NZ** or phone **0800 CIRTEX (247 839)**

A. MODULE DIMENSIONS

MODULE (UNITS)	WIDTH (mm)	LENGTH (mm)	HEIGHT (mm)
Single (1)	400	715	440
Double (2)	400	715	860
Triple (3)	400	715	1280
Quad (4)	400	715	1700
Penta (5)	400	715	2120

B. ACTUAL MODULE SIZE & STORAGE VOLUME

MODULE (UNITS)	VOL (LTRS)	WATER STORAGE VOL (LTRS)
Single (1)	125.77	119.47
Double (2)	245.94	233.64
Triple (3)	366.08	347.77
Quad (4)	486.29	461.97
Penta (5)	606.32	576.00

C. MATERIAL PROPERTIES AND CHARACTERISTICS

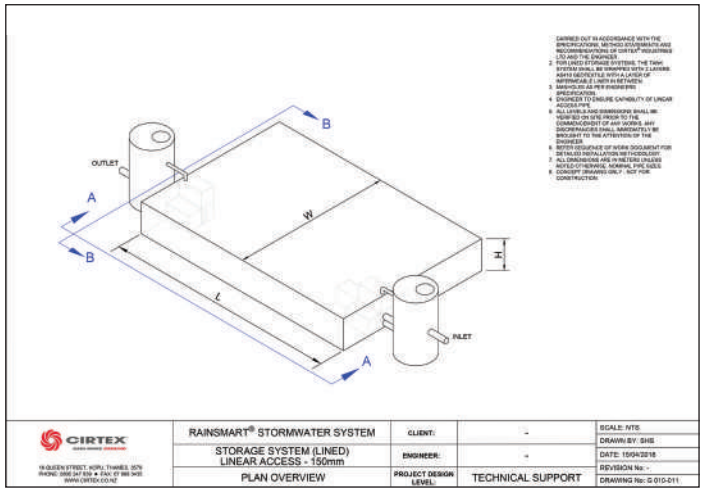
MATERIAL	85% Recycled Polypropylene & 15% Proprietary Mix
COLOUR	Black
SERVICE TEMPERATURE	-10˚C to 75˚C
FLOW RATE	0.040 m^3/sec

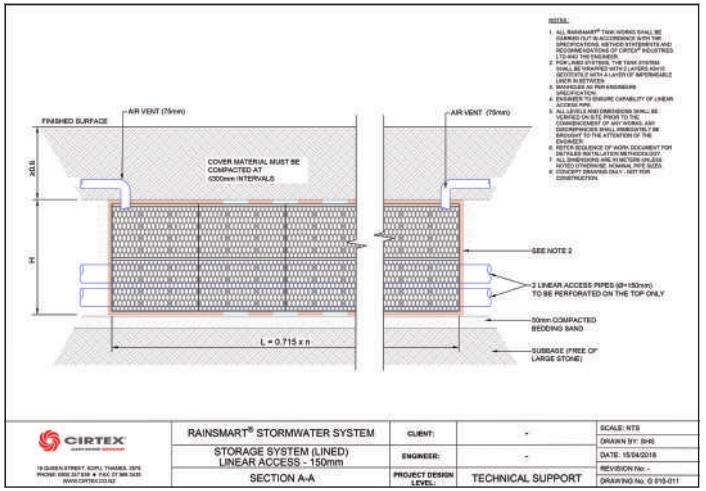
CAD DETAILS

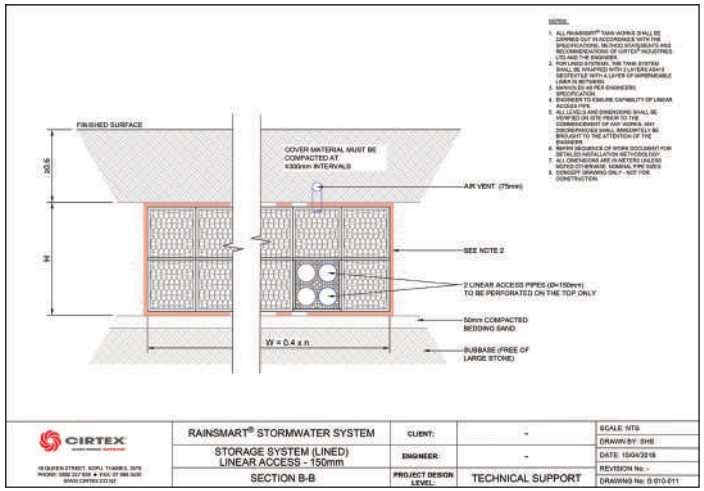
Cirtex has a large number of CAD drawings for the RainSmart Stormwater System, covering most applications. These can also be modified for your project as required.

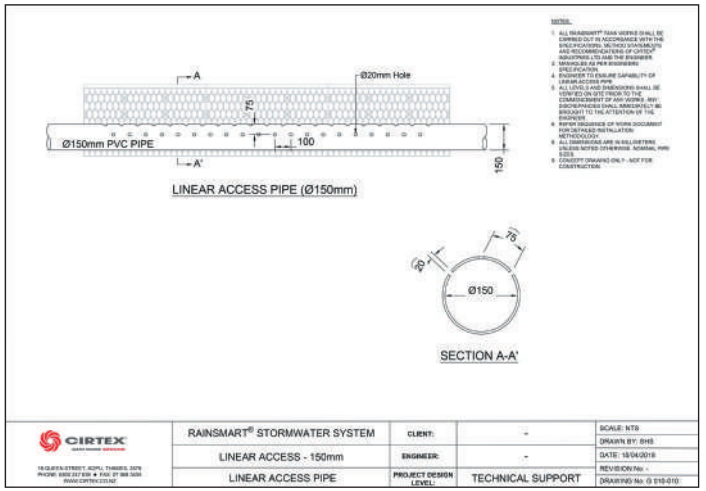
Phone **0800 CIRTEX (247 839)** or email **INFO@CIRTEX.CO.NZ** for a copy in either .pdf or .dwg formats.

RAINSMART - Typical Cross Sections

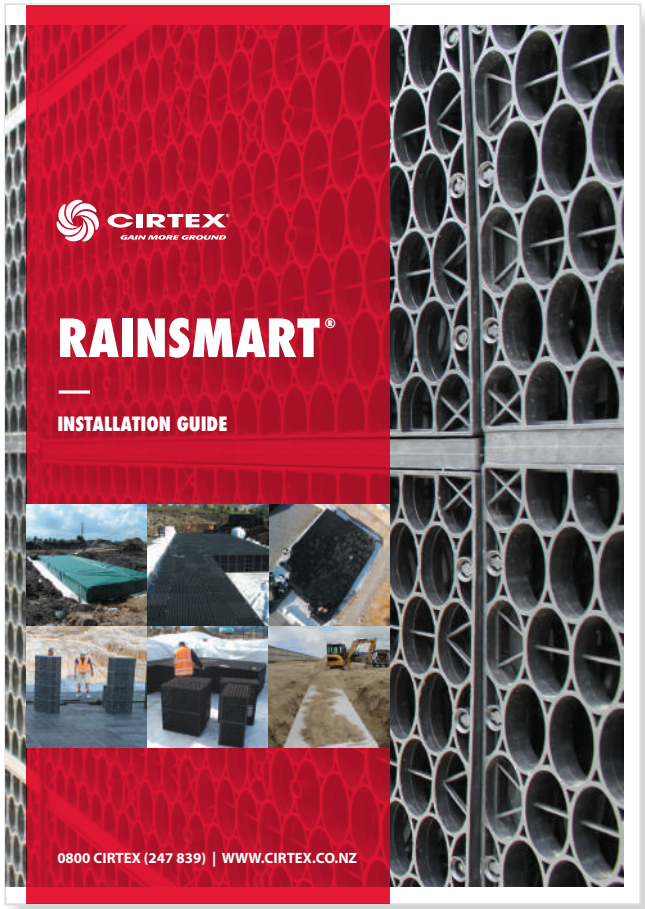




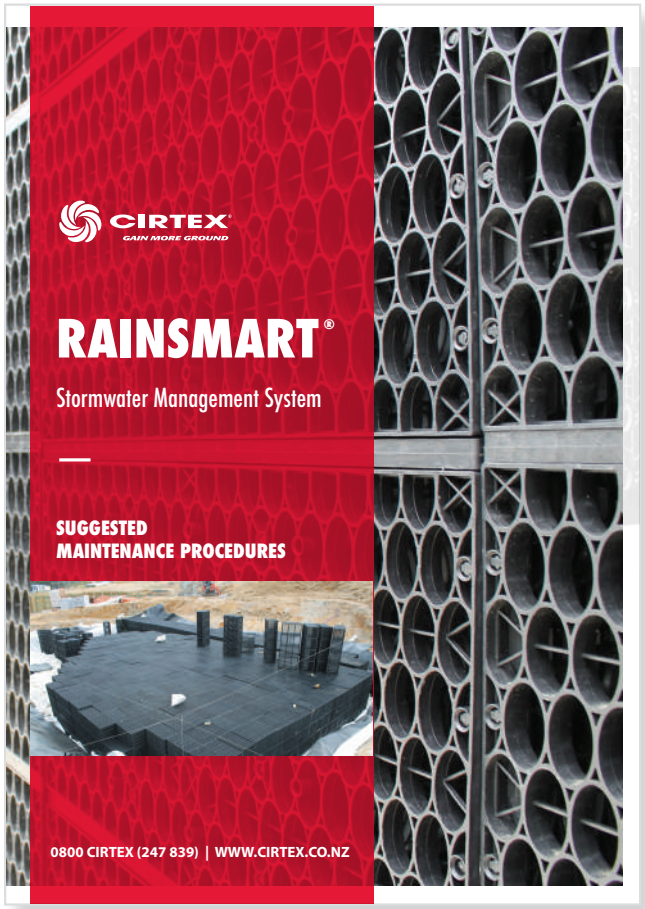




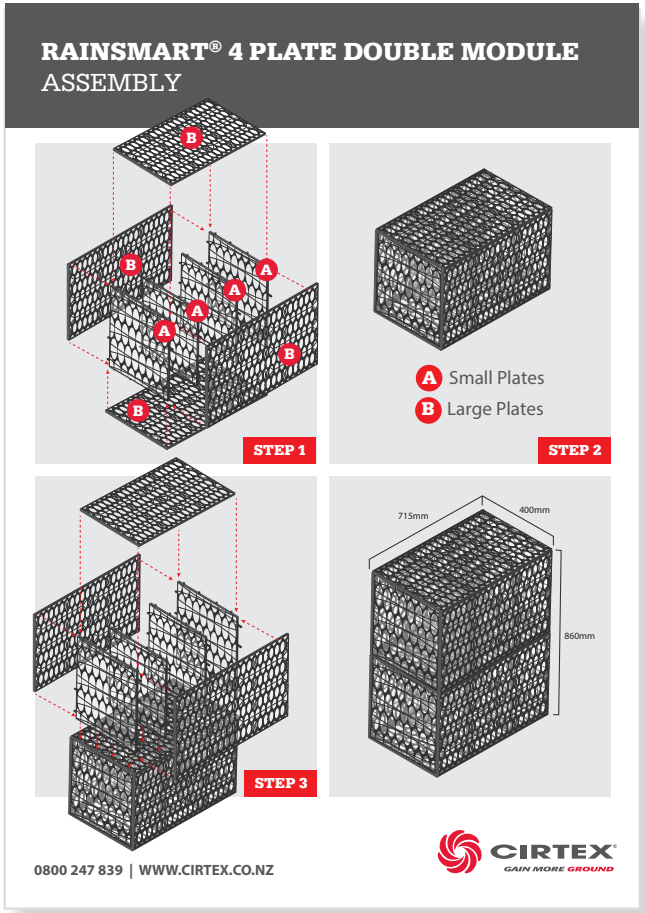
SUPPORT DOCUMENTATION



RAINSMART - Installation Manual



RAINSMART - O & M Manual



Visit **WWW.CIRTEX.CO.NZ** or phone
0800 CIRTEX (247 839) for a copy of these documents.

FOR FULL INSTALLATION INSTRUCTIONS
Visit **www.cirtex.co.nz**

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PROJECT DESIGN OPTIONS

This text has been taken from Cirtex Project Design Options F 001 001 document. For the latest copy refer to our website **WWW.CIRTEX.CO.NZ** or phone **0800 CIRTEX (247 839)**

TECHNICAL SUPPORT

Technical support is our standard, no-cost customer support which is available by telephone, email or during sales representative's routine visits during normal business hours to provide support on our range of products and their suitability for a given project. This support can include data sheets, case studies and other relevant technical backup and a quotation if required.

This support is based on our understanding of your requirements and assumed or client supplied site information. Any specifications, sketches, plans or drawings provided by us do not necessarily relate specifically to a particular project or site, and should not be relied on as such.

Should you require further design assistance we can either offer our in house concept design service or alternatively, full 3rd Party Design which is provided by a 3rd party registered engineer.

PROJECT CONCEPTS

This level of support is normally carried out by our in house technical team and is very useful for establishing concepts used for proposals and costing purposes. Project Concepts can often form part of the full 3rd Party Design should you make a decision to obtain a 3rd Party Design at a later date. Outputs for this service will vary depending on the application and situation, however, will normally include reinforcement layout, type and strength required for reinforced slope and wall applications, anchor selection guidelines for Earth Anchoring applications, and CAD drawings and installation guidelines. Details of what will be provided can be discussed with one of our technical team. For earth anchoring applications a site pullout test is often included in the concept design phase.

This level of design carries no contractual warranty and a producer statement is not provided. This service is based on assumed or client supplied information. You should ensure that any outputs from a Project Concept service are checked by a suitable qualified and certified engineer instructed by you. Our technical team will provide the relevant calculations and drawings to your engineer and will cooperate with the engineer.

Any costs associated with this service will be discussed at the time of acceptance.

3RD PARTY DESIGN

If 3rd Party Design is required, it is carried out by a suitably qualified and registered 3rd party engineer. Prior to providing a quotation for this type of design, in depth discussion will be carried out to establish the exact requirements of the client and scope of the design. Each design is costed accordingly and based on the work involved to fulfil the requirements of the client. These costs will be defined in the engagement documentation. The Project Concept Design can often be utilised to reduce the overall cost to the client in this stage.

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