RAAFT®

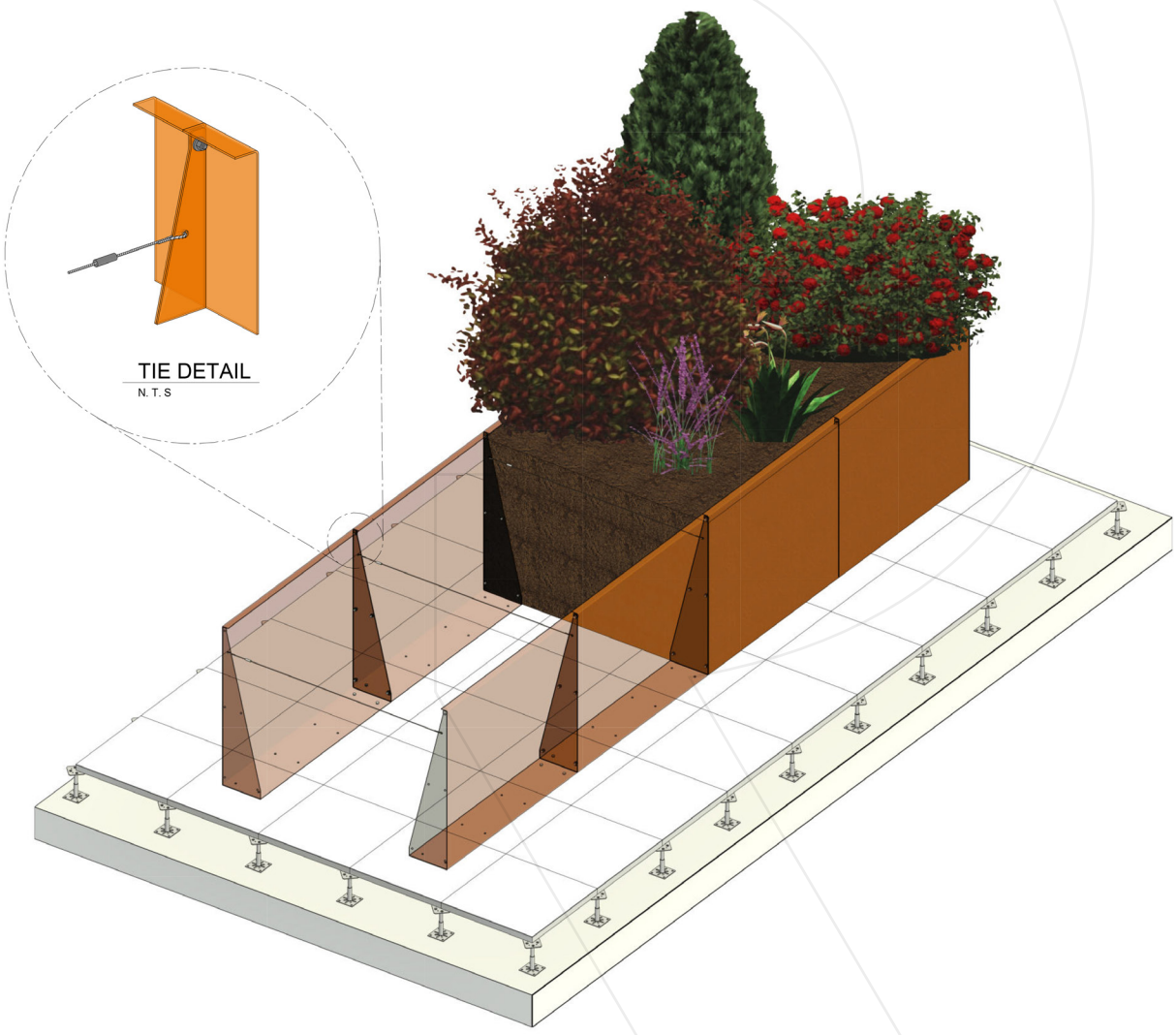
PLANTERLINE

TECHNICAL DATA SHEET

Reference:
DS-PP-0323

PLANTERLINE

TECHNICAL DATA SHEET



Planterline

Find out more or request a sample

Email hello@raaftsystems.com or visit raaftsystems.com

PLANTERLINE

TECHNICAL DATA SHEET

Planterline

PRODUCT NAME	COLOR	DIMENSIONS		OTHER	
Planterline Planterline Custom	Powder coated Corten	Maximum straight panel length	2400mm (94.49 in)	Material specification	Corten A steel materials class A EN10029
		Maximum returns at corners	1000mm (39.37 in) Limited to one side		
		Height Range	300-1100mm (11.81-43.31 in)	Corner types	Folded
		Steel thickness	3mm (0.12 in)	Top return	40mm (1.57 in) single top

Loading analysis

PLANTER HEIGHT	PANEL DEFLECTION	WET SOIL LOAD PER M²
300mm (11.8 in)	0.02mm	300H - 510kg (1,124 lbs) 400H - 680kg (1,499 lbs) 500H - 850kg (1,874 lbs) 600H - 1,020kg (2,249 lbs) 700H - 1,190kg (2,623 lbs) 800H - 1,360kg (2,998 lbs) 900H - 1,530kg (3,373 lbs) 1,000H - 1,700kg (3,748 lbs) 1,100H - 1,870kg (4,122 lbs)
600mm (23.6 in)	0.14mm	
900mm (35.4 in)	0.66mm	
1100mm (43.3 in)	1.1mm	

Structural calculations for our Planterline planters have been completed to ensure they are fit for standard use. Based on the calculations made, a deflection amount was measured on four planter heights as per the above.

Please note this information should be used as a guide only. Please contact us if you would like further information on the structural calculations made.

Standard Planterline planters only

PLANTER HEIGHT	WEIGHT PER LM
300mm (11.8 in)	28.66 lbs
400mm (15.8 in)	35.27 lbs
470mm (18.5 in)	39.68 lbs
500mm (19.7 in)	42.89 lbs
600mm (23.6 in)	54.01 lbs
700mm (27.6 in)	60.63 lbs
800mm (31.5 in)	67.24 lbs
900mm (35.4 in)	85.98 lbs
1000mm (39.4 in)	94.80 lbs
1100mm (43.3 in)	101.41 lbs

These weights are for standard Planterline planters only and anything custom would need to be discussed with technical team.

Find out more or request a sample

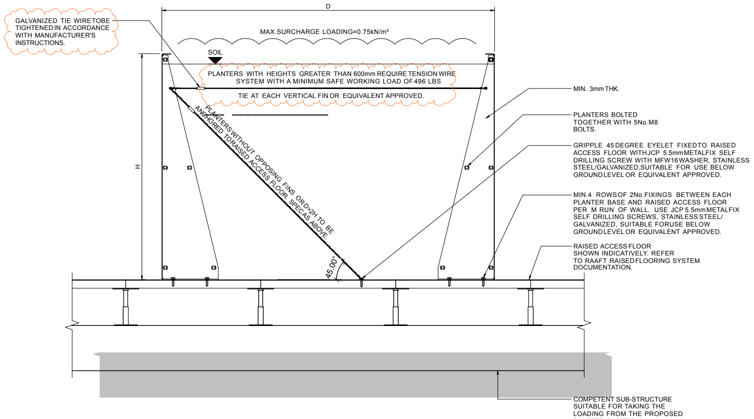
Email hello@raaftsystems.com or visit raaftsystems.com

Ref: DS-PP-0323 Last update: December 2025

PLANTERLINE STRAIGHT

INSTALLATION GUIDE

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEER'S AND ARCHITECTS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
3. ALL DIMENSIONS TO BE CONFIRMED BY THE ARCHITECT PRIOR TO CONSTRUCTION.
4. FOR SITE SETTING OUT REFER TO THE ARCHITECTS DRAWINGS.
5. ALL STEELWORK TO BE GRADE S355 U.N.O

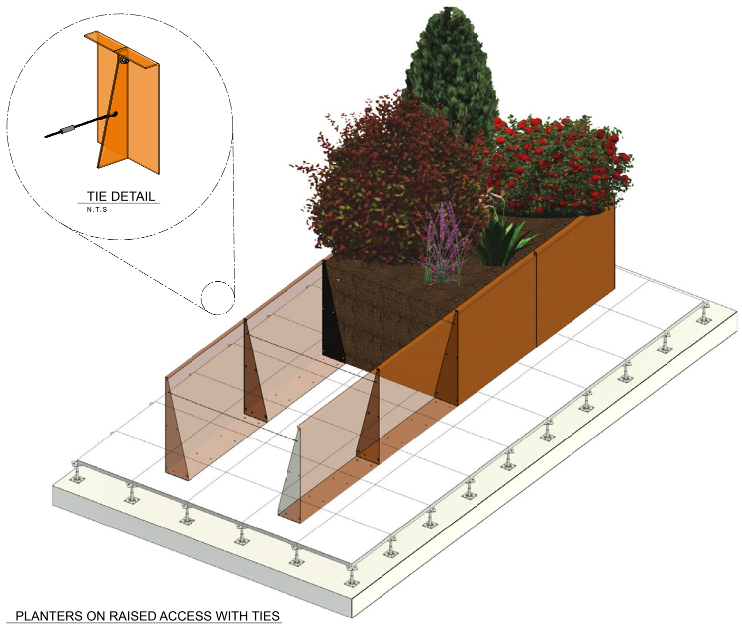


SECTION THROUGH TYPICAL PLANTER ON RAISED ACCESS

1:10

1.THE INSTALLATION OF THE PLANTER SYSTEM ON EXISTING STRUCTURES IS SUBJECT TO THE LANDLORDS ENGINEER'S REVIEW OF THE PROPOSED LOADINGS ON THE FOUNDING STRUCTURE BELOW.

2.RISK OF INSTABILITY/TOPPLING OF PLANTERS DURING CONSTRUCTION. CONTRACTOR TO INSTALL ALL FIXINGS AND TIES PRIOR TO LOADING OF PLANTER SYSTEM WITH SOIL. CONTRACTOR TO CONSIDER SAFE STORAGE OF UN-BUILT/ INCOMPLETE PLANTERS.



PLANTERS ON RAISED ACCESS WITH TIES

N.T.S

GENERAL CONSTRUCTION NOTES

1. ALL WORK & MATERIALS TO COMPLY WITH THE RELEVANT US STANDARDS, CODES OF PRACTICE AND THE BUILDING REGULATIONS
2. THE ENGINEER IS TO BE INFORMED IF ANY DETAIL INDICATED OR IMPLIED ON THIS DRAWING CANNOT BE MAINTAINED.
3. THE CONTRACTOR SHALL ENSURE THAT THE STABILITY OF THE FRAME IS MAINTAINED AT ALL STAGES OF CONSTRUCTION AND DECONSTRUCTION.
4. COMPETENT SPECIALIST SUB-CONTRACTORS SHALL DESIGN, INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY WORKS AND PROGRAM THE JOB ACCORDINGLY IN A SAFE MANNER.

CDM REGULATIONS 2015 RESIDUAL HAZARDS

RESIDUAL HAZARDS IDENTIFIED

CONSTRUCTION

1.THE INSTALLATION OF THE PLANTER SYSTEM ON EXISTING STRUCTURES IS SUBJECT TO THE LANDLORDS ENGINEER'S REVIEW OF THE PROPOSED LOADINGS ON THE FOUNDING STRUCTURE BELOW.

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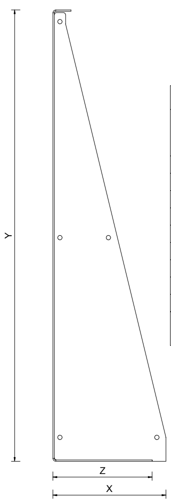
FUTURE DEMOLITION

A.NO SIGNIFICANT RESIDUAL HAZARDS BEYOND THOSE KNOWN TO AN EXPERIENCED CONTRACTOR

THIS REGISTER IS A NON-EXHAUSTIVE LIST OF RESIDUAL HAZARDS RELATING TO THE WORKS SHOWN ON THIS DRAWING THAT HAVE BEEN IDENTIFIED DURING THE DESIGN STAGE.

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A CONTRACTOR WITH THE APPROPRIATE SKILLS, KNOWLEDGE & EXPERIENCE AND IF THEY ARE AN ORGANIZATION, THE ORGANIZATIONAL CAPABILITY NECESSARY TO FULFILL THE ROLE



TYPICAL PLANTER SECTION

1:5

PLANTERS ON RAISED ACCESS FLOOR SIZES

REF.	HEIGHT (Y) in mm	FIN WIDTH (X) in mm	BASE WIDTH (Z) in mm	TIE REQ.	MAX SPACING (c/c) in mm
A	300 (11.8 in)	160 (6.3 in)	160 (6.3 in)	NO	800 (31.5 in)
B	400 (15.8 in)	200 (7.9 in)	200 (7.9 in)	NO	800 (31.5 in)
C	500 (19.7 in)	200 (7.9 in)	200 (7.9 in)	NO	800 (31.5 in)
D	600 (23.6 in)	200 (7.9 in)	200 (7.9 in)	NO	800 (31.5 in)
E	700 (27.6 in)	200 (7.9 in)	200 (7.9 in)	YES	800 (31.5 in)
F	800 (31.5 in)	200 (7.9 in)	200 (7.9 in)	YES	800 (31.5 in)
G	900 (35.4 in)	200 (7.9 in)	200 (7.9 in)	YES	800 (31.5 in)
H	1000 (39.4 in)	250 (9.8 in)	250 (9.8 in)	YES	600 (23.6 in)
F	1100 (43.3 in)	250 (9.8 in)	250 (9.8 in)	YES	600 (23.6 in)

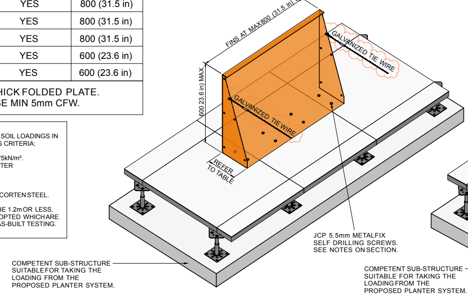
PLANTERS TO BE FORMED FROM MIN .3mm THICK FOLDED PLATE. WHERE WELDED JOINTS ARE REQUIRED USE MIN 5mm CFW.

DESIGN CRITERIA:

THIS PLANTER SYSTEM HAS BEEN DESIGNED TO ACCOMMODATE SOIL LOADINGS IN ACCORDANCE WITH BS EN 1997 + NA FOR THE FOLLOWING CRITERIA:

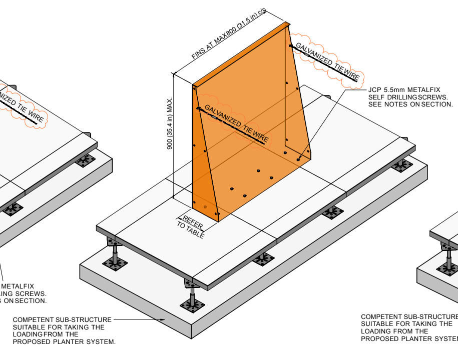
MAX. SURCHARGE LOADING ON TOP OF PLANTER = 0.75kN/m².
ASSUMED WATER TABLE LEVEL = HEIGHT OF PLANTER
RETAINED SOIL TYPE:
TOP SOIL, BULK DENSITY = 18kN/m³
ANGLE OF SHEAR RESISTANCE = 28 DEGREES
PLANTER STEELWORK GRADE = MIN. 3mm THICK GRADE S275 CORTEN STEEL.

MAX. CENTERS OF FINS WERE CALCULATED BY ABSTRUCT TO BE 1.2m OR LESS. CENTERS OF FINS PROVIDED IN THE ABOVE TABLE ARE TO BE ADOPTED WHICH ARE BASED UPON MANUFACTURER RECOMMENDATION FOLLOWING AS-BUILT TESTING.



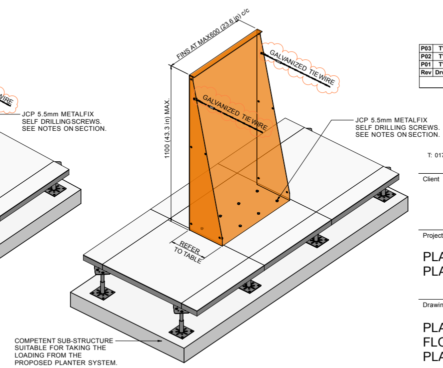
TYPE A-D UP TO 600mm (23.6 in) HIGH

N.T.S



TYPE E-G UP TO 900mm (35.4 in) HIGH

N.T.S



TYPE H-J UP TO 1100mm (43.3 in) HIGH

N.T.S

Rev	Drwn	Chkd	D.M.Y	Revision notes
P03	TV	LAW	28.04.25	TIE WIRE SPEC AMENDED TO CLIENT REQ.
P02	TV	LAW	02.04.25	UPDATED TO SUIT CLIENTS COMMENTS
P01	TV	LAW	26.03.25	ISSUED FOR INFORMATION

Revisions

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RAAFT

Project

PLANTERLINE 3mm STEEL PLANTER WALL SYSTEM

Drawing Title

PLANTERS ON RAISED ACCESS FLOOR GENERAL ARRANGEMENT PLANS, SECTIONS & DETAILS

Status S0-INITIAL STATUS

Scale Asindicated @A1 Proj.No. AC23163

Drawing Ref. AC23163- ABS- ZZ- ZZ- DR- S- 3001 Revision P03

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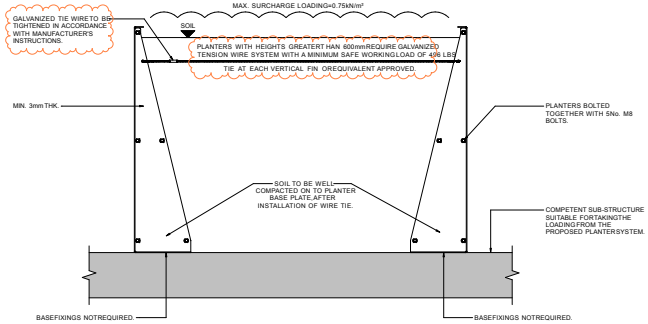
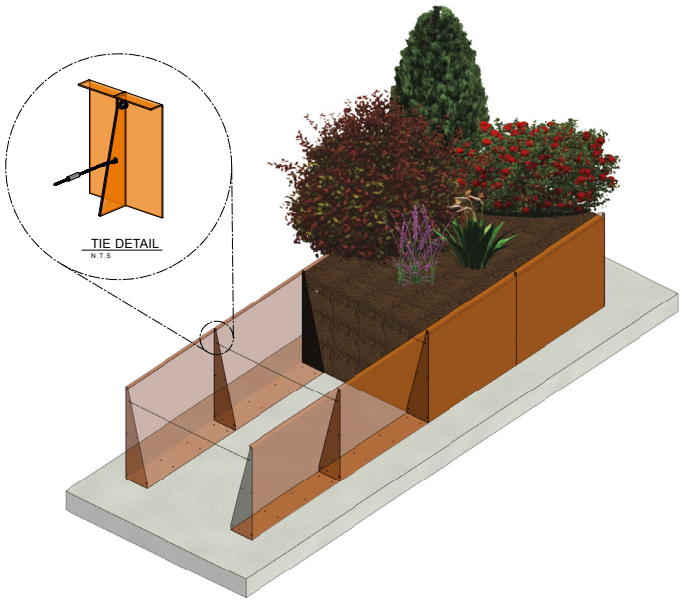
PLANTERLINE STRAIGHT

INSTALLATION GUIDE



SECTION THROUGH FREESTANDING PLANTER

1 : 1 0



FREESTANDING PLANTER WITH TIES

N. T. S

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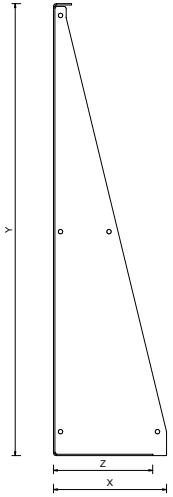

TYPICAL FREESTANDING PLANTER SECTION

1 : 5

FREESTANDING PLANTER SIZES					
REF.	HEIGHT (Y) in mm	FIN WIDTH (X) in mm	BASE WIDTH (Z) in mm	TIE REQ.	MAX. SPACING (c/c) in mm
A	300 (11.8 in)	100 (3.9 in)	160 (6.3 in)	NO	800 (31.5 in)
B	400 (15.8 in)	100 (3.9 in)	200 (7.9 in)	NO	800 (31.5 in)
C	500 (19.7 in)	100 (3.9 in)	200 (7.9 in)	YES	800 (31.5 in)
D	600 (23.6 in)	100 (3.9 in)	200 (7.9 in)	YES	800 (31.5 in)
E	700 (27.6 in)	200 (7.9 in)	200 (7.9 in)	YES	800 (31.5 in)
F	800 (31.5 in)	200 (7.9 in)	200 (7.9 in)	YES	800 (31.5 in)
G	900 (35.4 in)	200 (7.9 in)	200 (7.9 in)	YES	800 (31.5 in)
H	1000 (39.4 in)	250 (9.8 in)	250 (9.8 in)	YES	600 (23.6 in)
F	1100 (43.3 in)	250 (9.8 in)	250 (9.8 in)	YES	600 (23.6 in)
PLANTERS TO BE FORMED FROM MIN .3mm THICK FOLDED PLATE. WHERE WELDED JOINTS ARE REQUIRED USE MIN 5mm CFW.					

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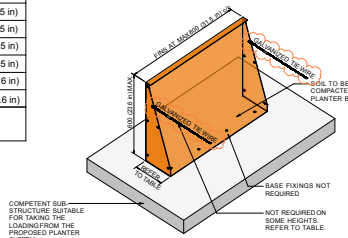
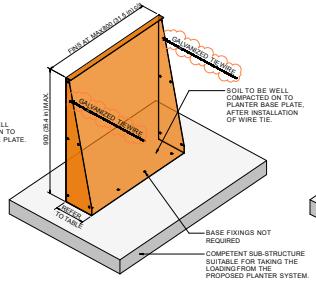


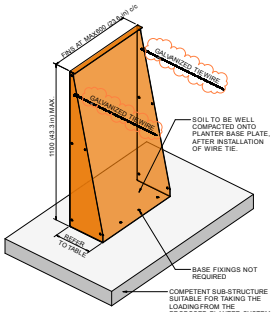
TYPE A-D UP TO 600mm (23.6 in) HIGH

N. T. S



TYPE E-G UP TO 900mm (35.4 in) HIGH

N. T. S



TYPE H-J UP TO 1100mm (43.3 in) HIGH

N. T. S

P03	TV	LAW	28.04.25	TIE WIRE SPEC AMENDED TO CLIENT REQ.
P02	TV	LAW	02.04.25	UPDATED TO SUIT CLIENTS COMMENTS
P01	TV	LAW	28.03.25	ISSUED FOR INFORMATION
Rev	Drwn	Chkd	D.M.Y	Revision notes
Revisions				

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Structural & Civil Engineers
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Client

RAAFT

Project

PLANTERLINE 3mm STEEL PLANTER WALL SYSTEM

DrawingTitle

FREESTANDING PLANTERS GENERAL ARRANGEMENT PLANS, SECTIONS & DETAILS

Status S0-INITIAL STATUS

Scale Asindicated @A1 Proj.No. AC23163

Drawing Ref. AC23163- ABS- ZZ- ZZ- DR- S- 3005 Revision P03

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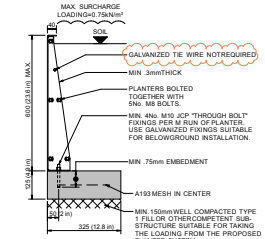
PLANTERLINE STRAIGHT

INSTALLATION GUIDE



TYPE A-D UP TO 600mm (23.6 in) HIGH

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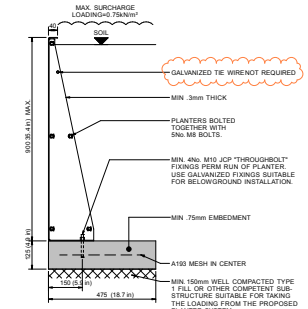
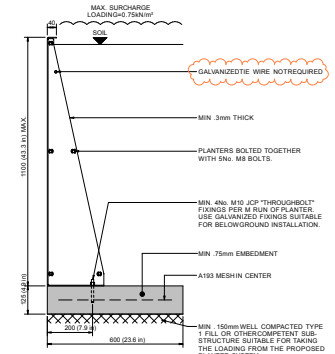


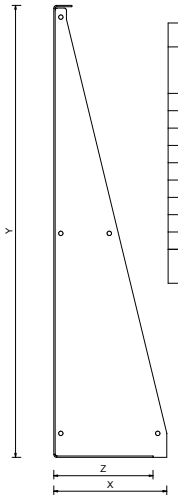
TYPE E-G UP TO 900mm (35.4 in) HIGH

1:10



TYPE H-J UP TO 1100mm (43.3 in) HIGH

1:10



TYPICAL BASE FIXED PLANTER SECTION

N.T.S

CONCRETE BASE FIXED PLANTERS				
REF.	HEIGHT (Y) in mm	FIN WIDTH (X) in mm	BASE WIDTH (Z) in mm	MAX. SPACINGS (c/c) in mm
A	300 (11.8 in)	100 (3.9 in)	100 (3.9in)	800 (31.5 in)
B	400 (15.8 in)	100 (3.9 in)	100 (3.9in)	800 (31.5 in)
C	500 (19.7 in)	100 (3.9 in)	100 (3.9in)	800 (31.5 in)
D	600 (23.6 in)	100 (3.9 in)	100 (3.9in)	800 (31.5 in)
E	700 (27.6 in)	200 (7.9 in)	200 (7.9in)	800 (31.5 in)
F	800 (31.5 in)	200 (7.9 in)	200 (7.9 in)	800 (31.5 in)
G	900 (35.4 in)	200 (7.9 in)	200 (7.9 in)	800 (31.5 in)
H	1000 (39.4 in)	250 (9.8 in)	250 (9.8 in)	600 (23.6 in)
F	1100 (43.3 in)	250 (9.8 in)	250 (9.8 in)	600 (23.6 in)

PLANTERS TO BE FORMED FROM MIN. 3mm THICK FOLDED PLATE. WHERE WELDED JOINTS ARE REQUIRED USE MIN 5mm CFW.

DESIGNCRITERIA

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MAX. SURCHARGE LOADING ON TOP OF PLANTER = 0.75kN/m².
ASSUMED WATER TABLE LEVEL = HEIGHT OF PLANTER
RETAINED SOIL TYPE:
TOP SOIL, BULK DENSITY = 18kN/m³
ANGLE OF SHEAR RESISTANCE = 28 DEGREES
PLANTER STEELWORK GRADE = MIN. 3mm THICK GRADE S275 CORTEN STEEL.

MAX. CENTERS OF FINS WERE CALCULATED BY ABSTRUCT TO BE 1.2m OR LESS. CENTERS OF FINS PROVIDED IN THE ABOVE TABLE ARE TO BE ADOPTED WHICH ARE BASED UPON MANUFACTURER RECOMMENDATION FOLLOWING AS-BUILT TESTING.

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GENERAL CONSTRUCTION NOTES

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CDM REGULATIONS 2015 RESIDUAL HAZARDS

RESIDUAL HAZARDS IDENTIFIED ⚠

CONSTRUCTION

1. THE INSTALLATION OF THE PLANTERSYSTEM ONEXISTING STRUCTURES IS SUBJECT TO THE LANDLORDS ENGINEER'S REVIEW OF THE PROPOSED LOADINGS ONTHE FOUNDING STRUCTURE BELOW.

2. RISK OF INSTABILITY/TOPPLING OF PLANTERS DURING CONSTRUCTION. CONTRACTOR TO INSTALL ALL FIXINGS AND TIES PRIOR TO LOADING OF PLANTER SYSTEM WITHSOIL. CONTRACTOR TO CONSIDER SAFE STORAGE OF UN-BUILT / INCOMPLETE PLANTERS.

FUTURE DEMOLITION

A.NO SIGNIFICANT RESIDUAL HAZARDS BEYOND THOSE KNOWN TO AN EXPERIENCED CONTRACTOR

THIS REGISTER IS A NON -EXHAUSTIVE LIST OF RESIDUAL HAZARDS RELATING TO THE WORKS SHOWN ON THIS DRAWING THAT HAVE BEEN NOTIFIED TO THE DESIGNER.

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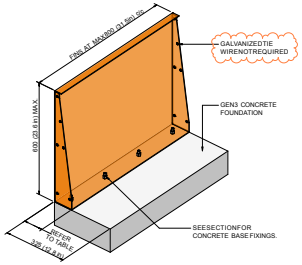
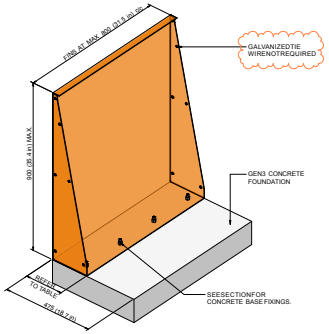


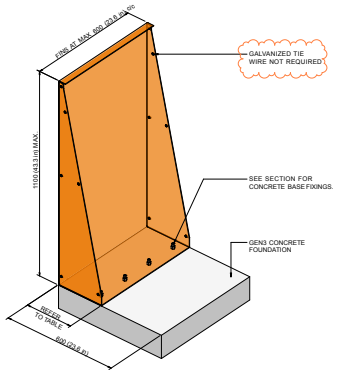
BASE FIXED PLANTER TYPE A-D

N.T.S



BASE FIXED PLANTER TYPE E-G

N.T.S



BASE FIXED PLANTER TYPE H-J

N.T.S

⚠ 1. THE INSTALLATION OF THE PLANTER SYSTEM ON EXISTING STRUCTURES IS SUBJECT TO THE LANDLORDS ENGINEER'S REVIEW OF THE PROPOSED LOADINGS ON THE FOUNDING STRUCTURE BELOW.

2. RISK OF INSTABILITY/TOPPLING OF PLANTERS DURING CONSTRUCTION. CONTRACTOR TO INSTALL ALL FIXINGS AND TIES PRIOR TO LOADING OF PLANTER SYSTEM WITH SOIL. CONTRACTOR TO CONSIDER SAFE STORAGE OF UN-BUILT / INCOMPLETE PLANTERS.

Rev	Drwn	Chkd	Date	Revision notes
P03	TV	LAW	28.04.25	TIE WIRE SPECAMENDED TO CLIENT REQ.
P02	TV	LAW	02.04.25	UPDATED TO SUIT CLIENTS COMMENTS
P01	TV	LAW	28.03.25	ISSUED FOR INFORMATION

Revisions

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Client

RAAFT

Project

PLANTERLINE 3mm STEEL PLANTER WALL SYSTEM

DrawingTitle

CONCRETE BASE FIXED PLANTERS NO WIRE TIE GENERAL ARRANGEMENT PLANS, SECTIONS & DETAILS

Status S0-INITIAL STATUS

Scale Asindicated @A1 Proj.No. AC23163

Drawing Ref. AC23163- ABS- ZZ- ZZ- DR- S- 3010 Revision P03

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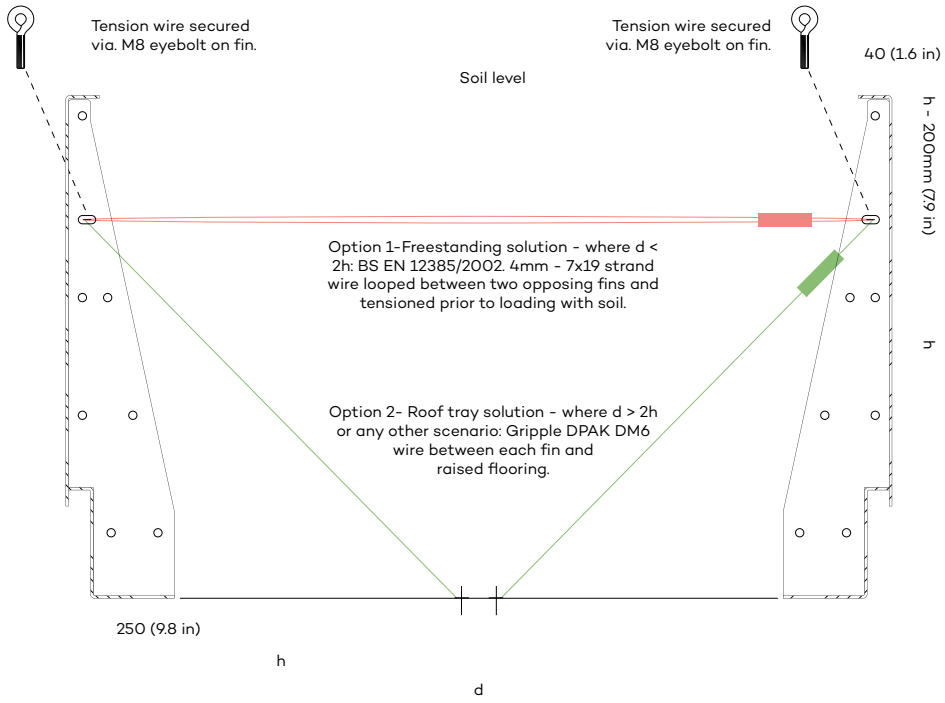
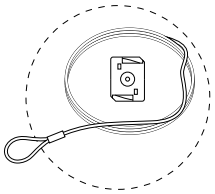
Strengthening options

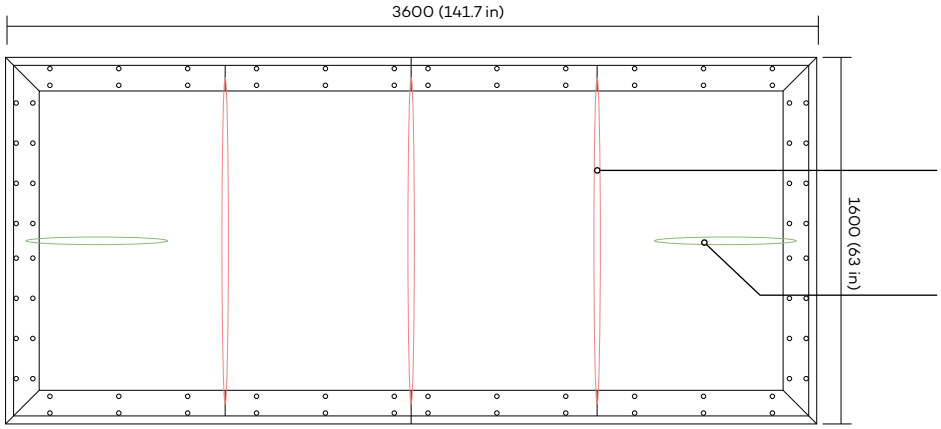
All planters higher than 600mm (23.6 in).





DM6 to be tensioned in accordance with manufacturers recommendations.

Plan view of both bracing solutions (Freestanding and Rooftray)



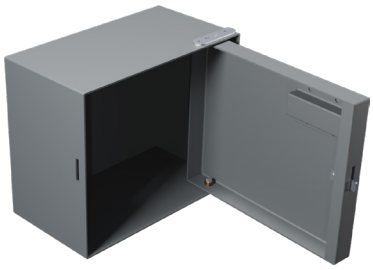
Option 1 Freestanding ties would require the symmetrical alignment of the fins, each side.

Use option 2 Rooftray ties on ends where no mirroring fin to tie to.

Find out more or request a sample

Email hello@raaftsystems.com or visit raaftsystems.com

Accessories



Lockable cabinet
Used within the planter walls (welded in place) for access or storage of weatherproof products/items. It can accommodate P67 rated power sockets and lighting boxes for external lighting.

For added security, a panel lock, complete with a key, prevents unauthorized access.

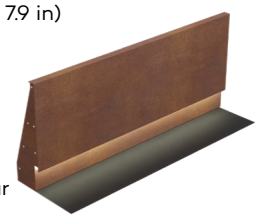
The cabinet comes in the following sizes:

500(H) x 600 x 200 mm (19.7 x 23.6 x 7.9 in)

400(H) x 500 x 200 mm (15.8 x 19.7 x 7.9 in)

250(H) x 300 x 200 mm (9.8 x 11.8 x 7.9 in)

Lighting detail
Illuminate your planters with our lighting options. Feel free to contact any member of our team if you're interested in enhancing your planters with a touch of light.



Installation Information

The installation is then completed by covering the extent of the floor structure panels, which pass beyond the planter perimeter with porcelain tiles. To secure the planter into concrete, we advise from past planter installations, the creation of a 300mm (11.8 in) wide by 150mm (5.9 in) deep concrete race around the planter's perimeter. M10 through bolts (supplied by Raaft®) are used for fixing down the planter into the concrete. Bracing becomes necessary for planters exceeding a height of 600mm. This is to account for potential loads imposed by soil and any additional stresses within a terrace environment. The recommended bracing solutions for Raaft® planters include tensioning wire or a metal strap spanning from one side to the other.

Product finishes

Corten A is a type of weathering steel which was developed to remove the need for regular painting and rust-prevention maintenance.

Note: Refer to the Corten guide for more information.

This is achieved by the formation of a natural stable coating of dark brown oxidation across the metal's surface which acts as a barrier to the corrosive effects of rain, snow and other weather conditions. When delivered, the Corten will contain mill-scale which will remove over time prior to the natural stable coating of dark brown being achieved. The weathering process can take around 18 months.

Powder coating starts with shot-blasting of the steel which removes mill-scale, oxide dirt, oil and grease from the substrate; followed by a 7-stage zinc phosphate pre-treatment process to prepare the surface. The product then receives the polyester powder coating to the requested color. Polyester has excellent exterior durability and color retention. Numerous color options from world leading powder manufacturers are available.

Choose from these finishes:

Corten

PPC

Find out more or request a sample

Email hello@raaftsystems.com or visit raaftsystems.com

Sustainability

Planterline is crafted from two material options: Untreated steel or Stainless Steel, and it boasts 100% recyclability. Consequently, Planterline stands out for its outstanding whole-life cost, as it is marketed with recycling in mind rather than incurring disposal costs. The primary component in steel production is iron, ranking second only to aluminum in terms of its natural abundance in the earth's crust. Considering current extraction rates, there exists a sufficient iron supply to sustain production for well over 1000 years.

Steel
Mild steel is widely recognized as a sustainable material for several compelling reasons:

1. **Longevity and Durability**
   Mild steel boasts exceptional longevity and durability. When compared to less robust materials, it provides extended service over many years. For instance, while other materials may require annual replacement, using mild steel every five years significantly reduces the environmental impact, as it necessitates less energy for continuous replacement.
2. **Versatility**
   Mild steel offers high versatility in terms of shapes and sizes during production. Its malleability allows it to take on various forms, making it highly adaptable and suitable for a wide range of applications.
3. **Recyclability**
   One of the most significant sustainable advantages of mild steel is its recyclability. While the percentage of recyclable content may vary by type, it typically contains a high percentage of recyclable material. This aligns seamlessly with its versatility, as any surplus steel from manufacturing processes can be repurposed for smaller products or recycled, making it an environmentally friendly metal choice.
4. **Absence of Harmful Chemicals**
   Unlike some other metals, the production of mild steel does not involve the release of harmful chemicals or toxins. This characteristic contributes to its eco-friendliness.

Product maintenance

Steel
For the Planterline, the steel is powder coated. This will require little/no maintenance as there won't be any interaction between this part of the product and the user.

Fire protection

Planterline planters are made using Corten A, or Mild Steel, neither of which burn nor pose a fire hazard.

Corten A is high performance materials that display excellent resistance to atmospheric corrosion when compared to other steels, making them exceptionally suitable for custom planter applications.

Protective equipment

We recommend that PPE (Personal Protective Equipment) is used when installing the Planterline:

a) Wear sturdy safety boots/shoes to protect your feet.

b) Protective eye wear such as safety glasses.

c) Strong gloves to protect your hands.

d) When using loud cutting equipment, wear ear plugs or hearing protection .

General construction notes

- All folding tolerances are ± 1.2mm with and angle variation of ± 1°
- All rolling tolerances ± 8mm
- All fabricated and welded components are manufactured to a tolerance of ± 2mm
- Tolerance of ± 5mm across a diagonal measurement
- Where powder coated components are applicable, they are completed to the following specification:

  Pre-treatment - shot blast SA 25

  Primer - Zinc-rich primer with a minimum of 60µ

  Top coat - Final top coat to be a minimumu of 60µ
- All Corten finishes are supplied as untreated/unweathered

Find out more or request a sample

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Storage and handling

The product is securely packed and sealed to ensure no movement of the product in transit. Depending on the size / weight of the consignment this may be palletized.

While there is no specific weight restriction on what is or is not safe to lift in manual handling, an assessment of the health and safety risks should be undertaken and measures taken to reduce the risk of injury so far as reasonably practicable.

The following guidelines may be useful:

a) **Each person should be fully trained in manual handling techniques.**

b) **The use of handling aids such as a cart, forklift, pallet truck or conveyor should be used if moving large volumes of cartons.**

c) **Break up large consignments into more manageable loads.**

d) **Ensure that the product is stored at a reasonable height, so avoiding the lifting of cartons from floor level or above shoulder height.**

Manual handling
Refer to bills of materials for weights.

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