

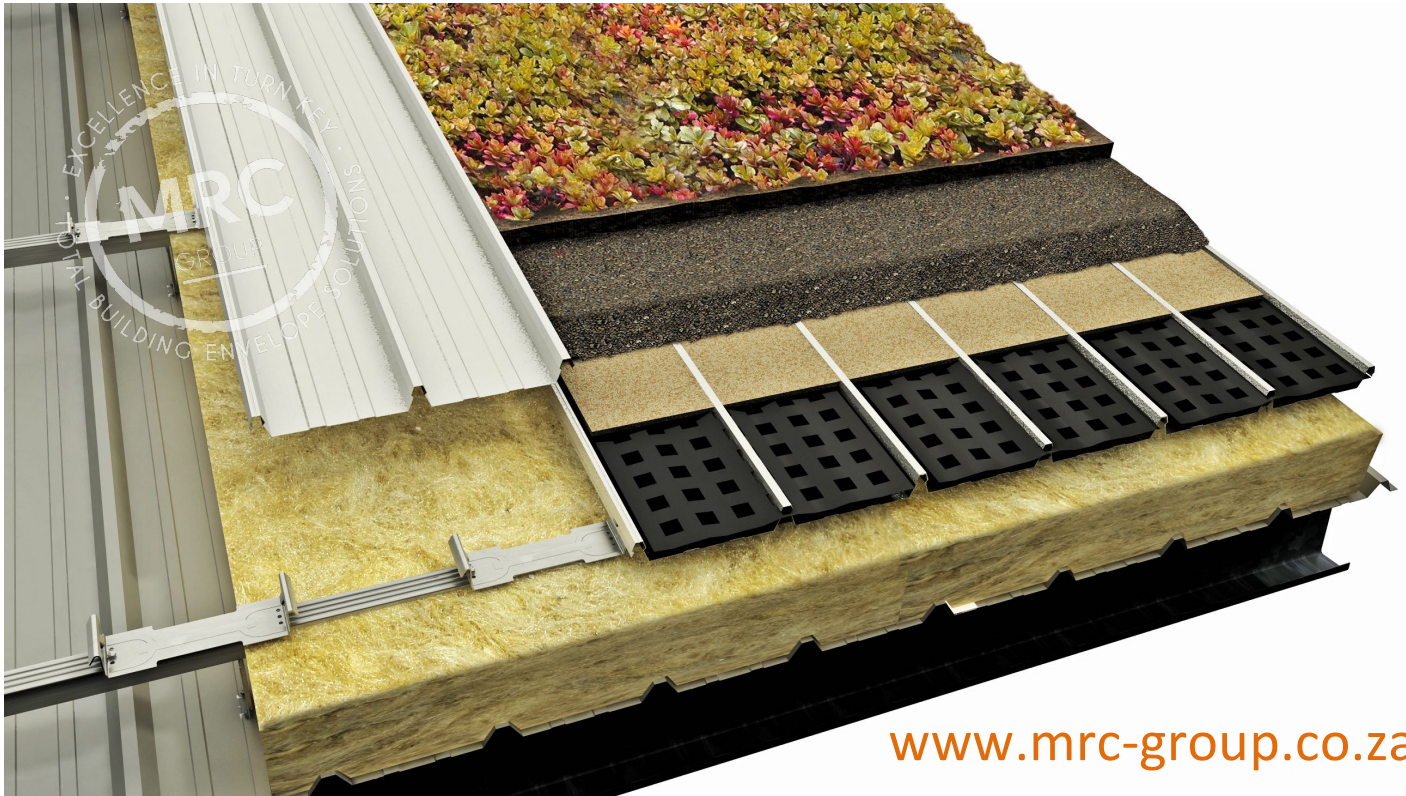
THE FERRUM RANGE

Excellence in Metal
Roofing & Cladding

info@mrc-group.co.za
www.mrc-group.co.za



GREEN ROOFS ON METAL ROOF SYSTEMS – TECHNICAL DATASHEET



www.mrc-group.co.za

SYSTEM OVERVIEW:

MRC Group's Green Roofs on an Aluminium 'Secret Fix' Metal Roof solution provides the opportunity to increase the thermal and acoustic performance of the roof system whilst providing a valuable method of managing rainwater run off.

Aluminium 'Secret Fix' or 'Concealed Fix' Metal over-roofing or new build roof systems are an ideal substrate to support a green roofing system as there are no exposed fixings providing a perfect anti-root membrane.

The impact of the urban heat island can be dramatically reduced in cities with the installation of Green Roof Systems whilst also improving the life span of the installed roof system.

MRC Group's installed system is backed with the unrivalled single source 'Guardian' System Warranty which covers designs, materials, installation & maintenance for the term of the green roof and metal roofing system.

KEY FEATURES:

- Dramatically improve the life expectancy of your roof system
- Filters pollutants from the air and reduces heat loss in winter
- Controls rainwater run off
- Relieves pressure off the underground rainwater pipes
- Available for new build built up and over-roofing metal refurbishment schemes
- Option of increasing the R-Value performance up to 10 (m².K/W)
- Excellent sound reduction & anti-rain drumming performance
- Backed with the up to 20 year 'Guardian' System Warranty

JOHANNESBURG – DURBAN – CAPE TOWN

For project specific specifications, CAD Details, Samples or technical assistance please contact our technical department on +27 (0) 861 672 476 or refer to our Technical Brochure available on www.mrc-group.co.za

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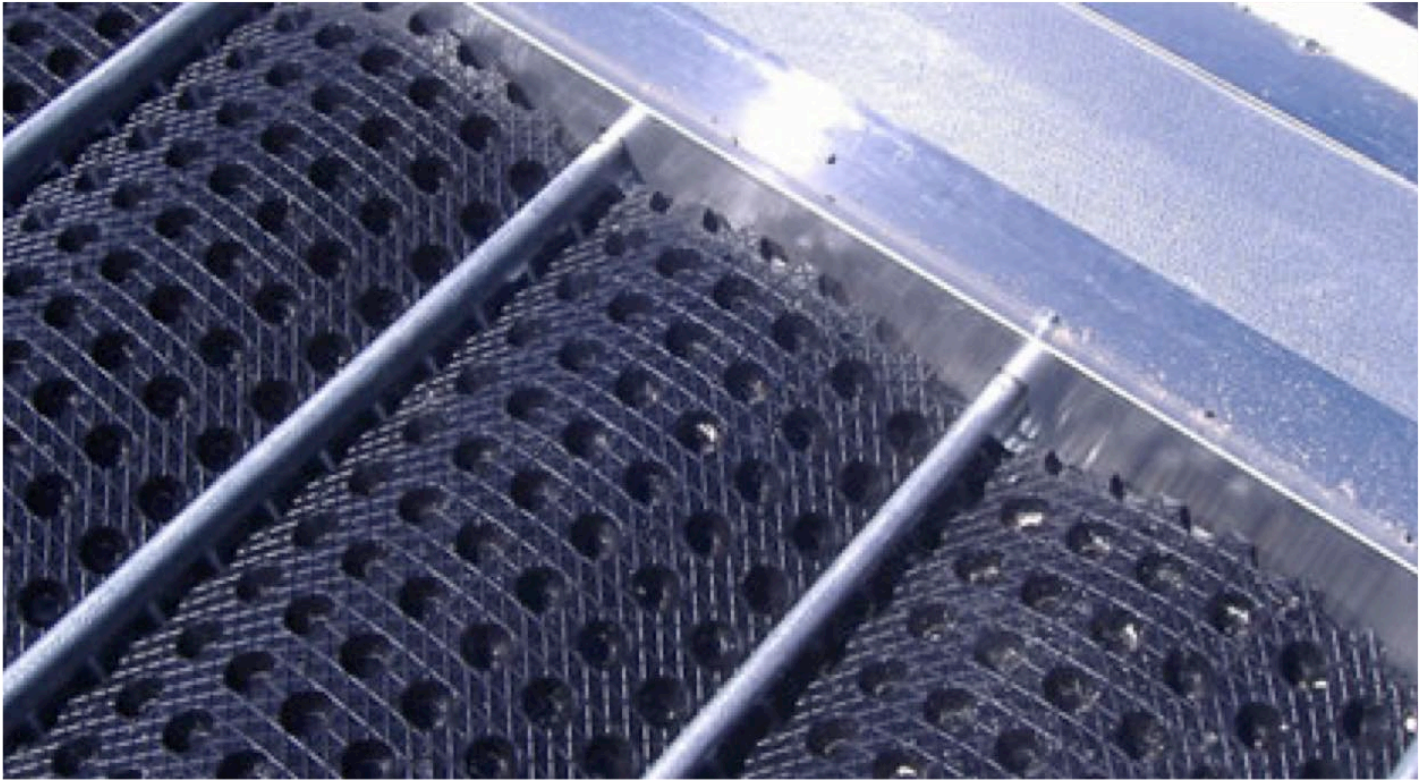
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TECHNICAL DATA FOR CORRECT CONSTRUCTION:

DESIGN OF THE GREEN ROOF SYSTEM

Succulents / hardy plants:	Various options as described below
Irrigation:	Irrigation system required
Growing Medium:	100mm Engineered Recycled Lightweight Root-Zone
Filter Mat:	Filter layer
Drainage Mat:	20mm drainage/reservoir
Saturated Weight:	86kg / m ² saturated weight of the Sedum Green Roof System

RETENTION OF THE GREEN ROOF ON A ALUMINIUM 'SECRET FIX' ROOF SYSTEM

Green roofs are retained on the roof even under steep roof pitches with the MRC clipped angle retention rail

Pitched Roof:	3 - 15° Roof Pitch – MRC clipped retention rails at Eaves & Ridge. 16 - 20° Roof Pitch – Internal MRC Clipped Retention Rails at 1500mm centres. 21 - 30° Roof Pitch – Internal MRC Clipped Retention Rails at 1000mm centres. 31 - 45° Roof Pitch – Internal MRC Clipped Retention Rails at 500mm centres.
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Curved Roof:	MRC clipped retention rails installed at centres to suit the radius of the curve. The tighter the curve the more Internal retention rails are required.
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TECHNICAL DATA:

ASHGRID™ SPACER SUPPORT SYSTEM

- Brackets with thermal pads - standard height range from 60 – 280mm (Deeper brackets available on request)
- Standard Bar lengths from 1.2 / 2.4 / 3.6 Metres
- 2 No. Self Driller Fixings per Bracket - AshFix Mild Steel 5/16 Hexagonal Head LS25 (Steel Purlins) or TF45 (Timber Battens) Self Driller Fixings, with an integrated 16mm washer flange, fixed through the existing roof sheet into the structure

OPTIONAL INSULATION

- Full range of insulation types & thicknesses available
- Fire Classification Class 1 (non-combustible)

R-Value (m ² .K/W)	2.5	3	4	5	6.25
Glass Wool	115mm	135mm	180mm	220mm	280mm
Bracket	115mm	135mm	180mm	220mm	280mm

i.e. Insulation compressed between purlins & roof sheets will lose at least 35% of the proclaimed R-Value, a constant cavity thickness does **NOT** compromise the R-Value

ACOUSTIC DATA – SOUND REDUCTION

- 0.8mm Aluminium Roof System 50dB +

WEIGHT OF A TYPICAL GREEN ROOF ON AN ALUMINIUM ROOF SYSTEM BASED ON PURLINS AT 1500mm CENTRES

- 0.50mm walkable trapezoidal liner 6.0 kg / m²
- 2 No. 135mm Bracket per Ln Metre 1.0 kg / m²
- 135mm roll out insulation 1.7 kg / m²
- 0.80mm Secret Fix / Pierced Fix Roof 4.0 kg / m²
- Green Roof System - Saturated 86.0 kg / m²
- Total Weight 98.7 kg / m²

Please note that green roofs must only be installed onto an aluminum 'secret fix' or concealed fix roof system. All retention rails are to be clipped and not screw fixed.

SYSTEM WARRANTY

- Up to 20 year, single source 'Guardian' System Warranty covers Design, Materials, Workmanship & Maintenance.



Green Roof on an Aluminum Secret Fix Roof System



Strip of drainage stones behind retention rail



Penetration and drains protected by retention rails

ACCREDITATIONS



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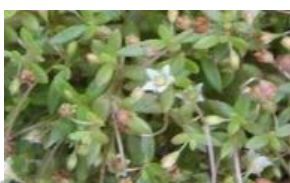


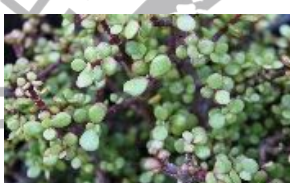
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BOTANNICAL NAME	HEIGHT	BLOOM TIMES		
Crassula spatulata	100	Spring / Summer		
Crassula Pellucida subsp. brachypetala	100 – 150	Spring / Summer		
Crassula Pellucida subsp. marginalis	100	Spring / Summer		
Crassula fragilis	100	Spring / Summer		
Crassula expansa	100	Summer		
Crassula mucosa	100 – 150	Spring / Summer		
Portulacaria afra (prostrata)	150	Spring		

A lightweight, low-maintenance roof system, typically with succulents or other hardy plant species planted into a shallow substrate (typically 100 mm) that is low in nutrients. Irrigation might be required depending on location and aspect. Plants are available in 24 plug trays, 6 packs or pre-cultivated to 95% coverage.

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