Fielders HiKlip® 630

Do you want? Higher Strength and Higher Durability

Do you need? Higher Water Carrying Capacity and Higher Spans

At no extra cost? Then Fielders has the solution.

FIELDERS

FINISH ON TOP WITH FIELDERS STEEL ROOFING

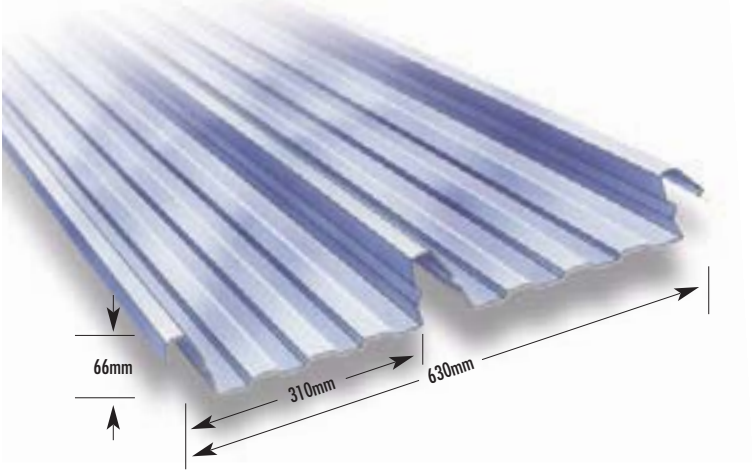
The Springwood Mega Centre

The developers of the Springwood Mega Centre on the outskirts of Brisbane made HiKlip® 630 the deck of choice for their 25,000m² roof.

One of the advantages driving this choice was the security of Fielders' 20 Year Watertight Installation Guarantee. The Guarantee was provided after an inspection of the excellent workmanship supplied by a Fielders Approved Contractor, in this case Northside Roofing. Fielders' 20 Year Watertight Guarantee applies to all roofs installed by Fielders Approved Contractors.

Springwood Mega Centre – Aerial view

Shopping Centres, Huge Warehouses,



HiKlip® 630. High winds. Torrential rain. Relentless foot traffic.

The strongest member of Fielders Concealed Fix Roofing Profiles. Designed to perform under the toughest possible conditions.

Strength and Durablility.

The strongest member of the Fielders concealed fix profiles. A monster 66mm rib height makes the HiKlip® 630 profile superbly resistant to foot traffic damage. Forget worries about services and following trades damaging your roof.

Security.

Need a roof that's sealed against break-ins? HiKlip® 630 enhances the security of any building large or small, from shopping centres to bulk goods warehouses and offices. HiKlip® 630 is extremely difficult to 'unzip', resisting even determined break-in efforts via the roof.

Cyclonically tested Concealed Fix Profile.

HiKlip® comes with an extra strong 66mm rib, which means greater strength, fewer purlins and cost savings for you. The cyclonically tested profiles over and under clipping action on the side lap gives greater strength to withstand the strongest winds making Fielders HiKlip® your best bet in the big wet. – See tables on back page.

Water carrying capacity.

No other concealed fix roofing profile can handle the amount of rainfall that HiKlip® 630 does. Enjoy peace of mind knowing that your roof can deal with any deluge.

Long lengths - No joints - Over 100 metres.

As with all of Fielders Concealed Fix profiles, HiKlip® 630 is now offered in continuous lengths rolled on site, meaning no joints and no leaks. Our unique flashing fixing system allows flashings to be attached to HiKlip® 630 without piercing the roof itself. The same system accommodates thermal expansion differentiation between the roofing and the flashing.

Patented double-clip action ensures maximum strength.

HiKlip's unique patented double clip action provides optimum security for shopping centres. HiKlip® prevents the break-ins through the roof deck that are commonly associated with other roofing profiles. This over-and-under double clipping action on the side lap also gives added strength to withstand the strongest wind, whilst allowing the sheet to move with temperature changes.

Patented double-clip action ensures maximum strength.

Melbourne Cricket Ground (MCG)

Iconic Buildings... Harsh Conditions, Fie

STEEL SMART Optimisation with Fielders HiKlip® 630.

Greater purlin spacing is an economical solution.

Fielders HiKlip® 630 allows design freedom not previously available with concealed fixed trapezoidal roofing profiles.

The optimum and most economical solution for designing roofs is to maximise the spanning capabilities of a deck. However, factors like purlin centres, sizing and therefore cost need to be considered as possible reactions to such a solution.

In the past these issues have prevented designers from fully accessing the cost savings from long length sheets, however HiKlip® 630 solves these problems. With HiKlip® 630, the purlin centre need not dictate the cost of the clips.

- Purlin spacing up to 4 metres – Save on excessive runs of purlins.
- Half the clips – Half the cost
- Save up to $2.00 per m^2
- HiKlip® 630 provides a deck with twice the water carrying capacity of traditional concealed fix profiles.
- Additional savings can be achieved depending on gauge thickness.
- Patented double-clip action withstands even the strongest winds.
- At 66mm, HiKlip® 630 possesses the highest and strongest ribs on the market.

HiKlip's special rib design makes it so strong that it allows longer spans, which can be achieved in two ways:

Option 1– Steel Smart

Fielders Purlin and Cladding Optimiser

Fielders Steel Smart will provide design options that capitalise on the span capabilities and benefits of all concealed fixed profiles, providing both optimised purlin placement and roofing profiles, saving you time and money. STEEL SMART, Fielders' unique roofing and purlin optimisation software enables the user to insert basic project information and receive the most practical and/or economical purlin and roof decking solution.

Whilst on occasion the software offers screw fixed options, the minimal cost savings demonstrated are clearly outweighed by the benefits of using Fielders concealed fix profiles such as HiKlip®.

The Steel Smart software will produce purlin designs for HiKlip® that far exceed the spacings for other conventional concealed fixed decks. Thus the number of clips and the labour for fixing them can be substantially reduced.

Option 2 – Stagger Fix

Use the HiKlip® 630 stagger fix option and the savings are built in. Strength, durability and water carrying capacity come at no extra cost compared to traditional 700mm cover decking when the staggered clip fixing method is used. Contact Fielders and maximise your savings.* Fielders HiKlip® provides two major benefits:

- **High resistance to wind loads at long spans.**
- **Highest water carrying capacity.**

In this situation, HiKlip® can be staggered fixed and still resist very high wind loads. Even though stagger fixing the deck on the purlin effectively doubles the span, the deep HiKlip® profile easily resists high wind loads without the associated costs of continuously fixing the deck to the purlins, and without compromising the capacity of the specified purlin size. See table on next page.

**Independent costing comparisons have been used to formulate this data.*

Adelaide Airport

Progressive Enterprises Ltd (New Zealand).

elders HiKlip® 630 Goes the Distance

Staggered Clip Costing Comparisons

Purlins at 1200mm spacings	.48BMT KingKlip Colorbond Fully clipped	.42BMT HiKlip Colorbond Fully clipped	.42BMT HiKlip Colorbond Stagger clipped	.48BMT HiKlip Colorbond Stagger clipped
Product				
Clip cost	$1.44	$1.98	$0.99	$0.99
Cost of deck	$15.98	$15.90	$15.90	$17.76
Total Product cost	$17.42	$17.88	$16.89	$18.75
Labour				
Loading deck	$3.75	$3.75	$3.75	$3.75
Fixing clips	$1.00	$1.10	$0.60	$0.60
Laying deck	$6.00	$6.60	$6.60	$6.60
Total Labour cost	$10.75	$11.45	$10.95	$10.95
Total System cost	**$28.17**	**$29.33**	**$27.84**	**$29.70**

Please go to www.fielders.com.au for fixing instructions and performance data.

HiKlip can be stagger fixed to every second or third purlin to provide an effective span of up to 4000mm in regions A and B only.

Assumptions

Pricing per m^2
KingKlip @ $1.20 ea
HiKlip @ $1.50 ea

Data certified by Wilde and Woollard, quantity surveyors.

WATERTIGHT 20 YEAR HIKLIP® GUARANTEE

20 years without a leak – guaranteed.

When you need a Guarantee as strong as our decking, we're good for it. Fielders HiKlip® 630 comes with Fielders' famous 20 year Watertight Installation Guarantee. Specify Fielders concealed fix decking. Have it installed by a Fielders Approved Contractor. Get a roof that's guaranteed not to leak for 20 years. Guaranteed watertight, or we'll repair or replace it for you.

We'll go to any length to meet your needs.

Wherever you are around Australia, one of our Fielders mobile mills can come right to your site to roll-form your HiKlip 630 decking to order. With the capability to roll continuous lengths over 100 metres, step joints, multiple long load deliveries and transport damage become things of the past.

Fielders HiKlip® 630 in use
Darwin Convention Centre

An Australian landmark in the making, Darwin's prestigious new Convention Centre demanded the use of Fielders HiKlip® 630 – the only concealed fix profile with the span capability, strength, water handling and aesthetics to do the job.

Fielders HiKlip® 630 excelled through a two year selection process that eliminated all others. Along with strength suited to an environment prone to cyclonic winds and torrential rain, HiKlip® 630 was the only concealed fix profile able to be rolled in sheet lengths of over 40 metres onsite by Fielders Mobile Mills.

Walking distance from the Darwin CBD, the Convention Centre, when complete, will boast a building footprint of over 9,600m^2, with a total building area across all levels of 22,900m^2. The centre will cater for national and international events ranging from conferences to exhibitions and sporting galas.

As the $100m plus Darwin Convention Centre rises to take a place of prominence in the Darwin cityscape, it will serve as a structure of international focus, and a lasting testament to the strength, versatility and innovation of Fielders HiKlip® 630.

View of entire complex.

Aerial city view.

Darwin Convention Centre front entrance.

Non-Cyclonic

HiKlip® 630 Wind Load Capacity - Limit State Design (kPa)
Non - Cyclonic

Span (mm)	0.42 BMT						0.48 BMT					
	Single Span		End Span		Internal Span		Single Span		End Span		Internal Span	
	Service-ability	Strength	Service-ability	Strength	Service-ability	Strength	Service-ability	Strength	Service-ability	Strength	Service-ability	Strength
1200	4.50	8.40	5.00	8.60	6.00	11.50	5.05	10.75	5.55	11.50	7.25	14.25
1500	3.70	5.50	4.10	6.75	5.00	8.60	4.15	7.70	4.50	8.25	5.95	11.20
1800	3.00	4.00	3.35	5.30	4.00	6.75	3.35	5.60	3.70	6.10	4.95	8.60
2100	2.40	3.10	2.75	4.15	3.20	5.30	2.70	4.10	3.05	4.75	4.10	6.70
2400	1.90	2.45	2.25	3.40	2.55	4.15	2.15	3.05	2.50	3.85	3.50	5.25
2700	1.50	2.00	1.85	2.80	2.05	3.40	1.70	2.35	2.05	3.25	3.00	4.20
3000	1.15	1.60	1.55	2.40	1.75	2.80	1.35	1.90	1.65	2.80	2.60	3.50
3300	0.85	1.35	1.35	2.10	1.55	2.40	1.05	1.60	1.40	2.40	2.25	3.05
3600	0.65	1.15	1.15	1.80	1.35	2.10	0.84	1.45	1.15	2.10	1.95	2.85

HiKlip® 630 Wind Load Capacity - Limit State Design (kPa) - Non Cyclonic

Maximum Recommended Span (mm)
HiKlip® 630 Non Cyclonic

Span Type	0.42 BMT		0.48 BMT	
	Roof	Wall	Roof	Wall
Single Span	2000	2400	2400	2400
End Span	2200	2600	2700	2700
Internal Span	2600	2900	4000	3600
Unstiffened Overhang	150	150	150	150
Stiffened Overhang	500	300	500	400

HiKlip® 630 Recommended Span - Non Cyclonic

Design Parammeters

Region A:

$h = 10m$ $C_{p,e} = -0.65$ $P_u = 2.25kPa$

$v_u = 50m/s$ $C_{p,i} = 0.2$ $P_s = 1.93kPa$

$K_L = 2.0$

Cyclonic

Cyclonic Wind Load Resistance

HiKlip® 630 Wind Load Capacity - Limit State Design (kPa)
Cyclonic

Span (mm)	0.42 BMT				0.48 BMT			
	End Span		Internal Span		End Span		Internal Span	
	Serviceability	Strength	Serviceability	Strength	Serviceability	Strength	Serviceability	Strength
1000	3.00	6.25	-	-	3.60	8.10	-	-
1200	2.15	5.10	3.00	6.25	2.50	6.60	3.60	8.05
1500	1.55	4.20	2.15	5.10	1.70	5.40	2.50	6.60
1800	-	-	1.55	4.20	-	-	1.70	5.40

HiKlip® 630 Wind Load Capacity - Limit State Design (kPa) - Cyclonic

HiKlip® 630 Max. Allowable Roof Spans (mm)

Terrain Category	For Building Height <= 5.0m				For Building Height > 5.0m & <= 10.0m			
	Roof Area Notation & Uplift (kPa)	0.42 BMT		0.48 BMT		Roof Area Notation & Uplift (kPa)	0.42 BMT		0.48 BMT	
		End Span	Internal Span	End Span	Internal Span		End Span	Internal Span	End Span	Internal Span
1 & 2	D - 4.24	1355	1640	1500	1785	D - 4.70	1275	1570	1405	1700
	F - 5.43	1155	1455	1295	1585	F - 6.03	1050	1375	1200	1500
	G - 6.63	975	1305	1130	1420	G - 7.35	850	1215	1015	1430
2.5	D - 3.60	1470	1765	1680	1930	D - 4.21	1355	1645	1495	1800
	F - 4.61	1290	1580	1420	1720	F - 5.38	1160	1460	1300	1590
	G - 5.63	1155	1420	1260	1550	G - 5.63	980	1315	1130	1430

HiKlip® 630 Maximum Allowable Roof Spans (mm)

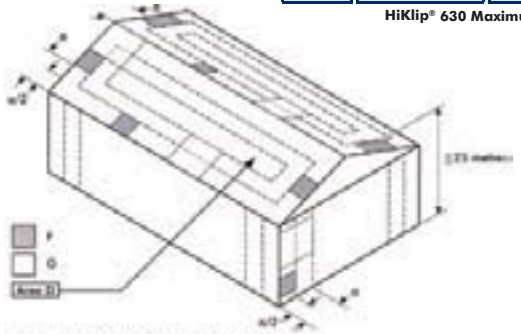
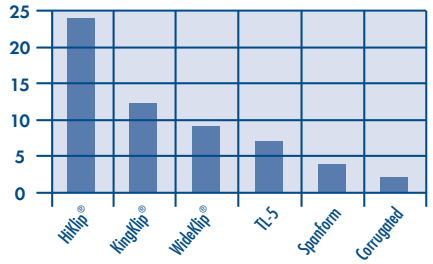


Figure 2.3.8 Local Pressure Factors

Note: The value of 'w' is the minimum of 0.2 breadth, 0.2 width or 0.2 height.
Local pressure factors are not applicable at the ridge where the roof pitch is less than 10°.

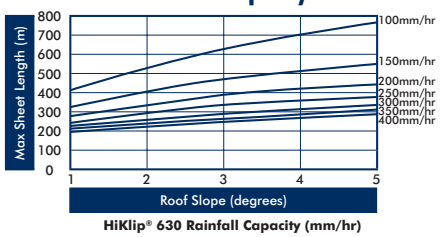


Discharge L/sec/metre

Figures based on exposure conditions as follows:

Rainfall intensity	70 mm / hr (Cairns 100 year)
Roof Slope	5.0 degress
Flow condition	Steady state & uniform
Flow (L/s/metre)	Per metre width of sheet

Rainfall Capacity



HiKlip® 630 Rainfall Capacity (mm/hr)

Purlin Spacings and Installation Costs.

The spacing of purlins at greater than 1.7 metre intervals gives rise to several safety issues and practical issues which can add considerable installation costs, such as side stitching of safety mesh & harnessing. Contact a Fielders approved roofing contractor or a Fielders office for further advice before spacing purlins at more than 1.7 metres.

Consult Fielders for technical advice. Recommended roof span is based upon point loading. Extreme wind loads may require shorter roof spans. Recommended wall span is based upon wind loading.

Zincalume®
Colorbond®

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