MetalMart

- Sheds
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GROOVE TUBE

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GROOVE TUBE

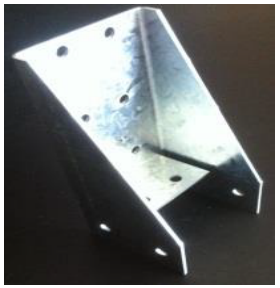
SPAN TABLES FOR FLOORING

100x50x1.2RHSJoists				
1.5kPaLiveLoad				
	SingleSpan		Continuous	
Spacing	450mm	600mm	450mm	600mm
Span	2500	2400	3000	2800

150x50x1.5RHSJoists				
1.5kPaLiveLoad				
	SingleSpan		Continuous	
Spacing	450mm	600mm	450mm	600mm
Span	3850	3650	4550	4150

SingleSpan150x50x1.5RHSFloorBearers									
1.5kPaLiveLoad									
LoadWidth	900mm	1200mm	1500mm	1800mm	2100mm	2400mm	2700mm	3000mm	3300mm	3600mm
Span	3100	3000	2800	2600	2400	2200	2100	2000	1900	1800

ContinuousSpan150x50x1.5RHSFloorBearers										
1.5kPaLiveLoad										
LoadWidth	900mm	1200mm	1500mm	1800mm	2100mm	2400mm	2700mm	3000mm	3300mm	3600mm
Span	3500	3200	2800	2600	2400	2200	2100	2000	1900	1800



The above span tables comply with the following specs:

AS1170 – "Structural Design Actions"
AS1684.2: "Residential Framed Construction"
AS4100 – "Steel Structures

DISCLAIMER: The site conditions and use of sections for design should be determined by a Engineer or suitably qualified person. These tables are to be used as a guide only.

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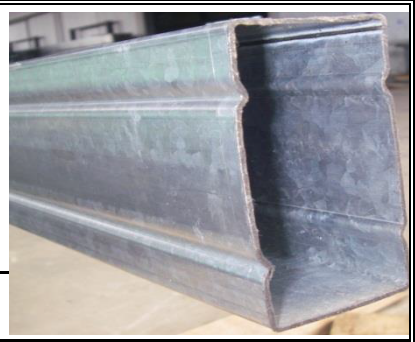
GROOVE TUBE

SPAN TABLES FOR ROOFING



Dimensions and Properties (Full Section)
GROOVE TUBE RECTANGULAR HOLLOW SECTIONS

Groove Tube Designation	WEB	FLANGE	THICKNESS	RADIUS	Nominal Mass per m	Perimeter	Full Section Area	2nd Moment of Area		Section Modulus		Plastic Modulus		Radius of Gyration		Torsion Constant	Yield Strength	Tensile Strength
	D	B	T	r_i			A	Ix	Iy	Zx	Zy	S_x	S_y	r_x	r_y	J	f_y	f_u
	mm	mm	mm	mm	kg/m	mm	mm^2	10^6 mm^4	10^6 mm^4	10^3 mm^3	10^3 mm^3	10^3 mm^3	10^3 mm^3	mm	mm	10^6 mm^4	Mpa	Mpa
1005012	100	50	1.2	1.8	2.79	298	354	0.4697	0.1614	9.394	6.457	11.51	7.14	36.5	21.4	0.3726	300	340
1505015	150	50	1.5	1.8	4.63	398	590	1.596	0.2871	21.289	11.483	27.115	12.485	52	22.1	0.7832	300	340

GROOVE TUBE SPAN TABLES FOR ATTACHED FLAT ROOF

Designation	RAFTER SPACING	MAXIMUM RAFTER SPAN (m)					
		WIND CATEGORY					
		N1	N2	N3	N4	N5	N6
		Design Pressures (Kpa)					
		0.69	0.95	1.5	2.2	3.2	4.4
100x50x1.2	900	5.0 (4.4)	4.8 (4.4)	3.8	3.2	2.6	2.2
	1200	4.6 (4.1)	4.2 (4.1)	3.3	2.7	2.3	1.9
	1500	4.0 (3.7)	3.4	2.7	2.2	1.8	1.6
	2100	3.7 (3.6)	3.2	2.5	2.1	1.7	1.5
150x50x1.5	900	7.6 (6.0)	7.3 (6.0)	5.9 (5.4)	4.8	4.0	3.4
	1200	6.9 (5.6)	6.4 (5.6)	5.1	4.2	3.4	3.0
	1500	6.0 (5.0)	5.2 (5.0)	4.1	3.4	2.8	2.4
	2100	5.6 (4.8)	4.8	3.8	3.1	2.6	2.2

The above load table has been prepared to give guidance to span capabilities of Groove Tube Sections used in domestic applications applying to verandah, patio, awning and carport.
Allowable spans apply to open structures as defined in the Australian Standards. Generally two or more sides are open and clear of walls.
Rafters are to be connected to beams with suitable brackets through both webs of the section.
Roof pitch should not exceed 5 degrees.
The above table includes a dead load of 0.1 Kpa for roof cladding and excludes any ceiling loads.
The span table is for a non trafficable roof.
Span table has been designed for Wind Classification regions as indicated in AS 4055 -2006.
A deflection serviceability limit of Span/150 has been applied to the above tables. Spans shown in brackets indicate a 20mm maximum deflection limit.
The table is for use in non cyclonic areas as defined in AS/NZ 1170.2 - 2002.
The structural sections comply the following Australian Standards.
- AS/NZ 4600 - 2005 Cold-formed Steel Structures.
- AS/NZ 1170.1 - 2002 Structural design actions-Permanent imposed and other actions
- AS/NZ 1170.1 - 2002 Structural design actions-Wind actions
-AS/NZ 4005 - 2006 Wind Loads for Housing
Minimum strength steel used in above table is based on a Yield stress of 300Mpa and Tensile strength of 340Mpa.
The site conditions and use of sections for design should be determined by a suitably qualified person.
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GROOVE TUBE BRACKETS AND ACCESORIES

FRAMING BRACKETS 0⁄ 5⁄PITCH

FB100

FB150

To fix rafters to beams or supports (mill finish)

ARCHITECTURAL FRAMING BRACKET

AFB10015

AFB15015

AFB10022.5

AFB10022.5

To fix rafters to beams or support (mill finish)

APEX BRACKET

APX10015

APX15015

APX10022.5

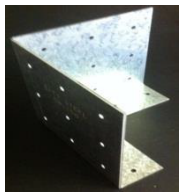
APX15022.5

External fixing of two rafters (mill finish)

CORNER BRACKETS

CB100

CB150



For joining perimeter beams at 90 (mill finish)

BEARER TO JOIST BRACKETS

JC100/150

For joining bearers to joists (mill finish)

FLOORING ADJUSTERS

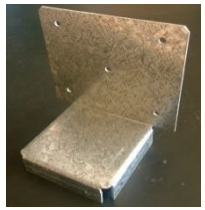
FLA89

Adjustable flooring to fit on 89x89 rhs (hdg finish)

POST TOPS

TOP075

TOP089

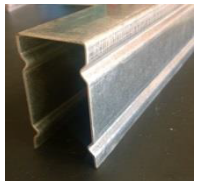


Post top to fit on top of 89x89 or 75x75 posts.

ENGINEERED INTERNAL JOINERS

JOIN100

JOIN150



Engineered internal floor groove tube joiners.

SIZE RANGE

100x50x1.2mm THICK x6.1M

100x50x1.2mm THICK x8M

150x50x1.5mm THICK x8M

Applications for GROOVE TUBE:

- FLOORING SYSTEMS
- SHED PURLINS
- PERGOLA BEAMS
- PATIOS
- STOCK YARDS
- PROPERTY ENTRANCES
- FENCING ALL TYPES
- CONCRETE BOXING
- INNOVATIVE BUILDING

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GROOVE TUBE PRICE LIST

All Prices include GST

100x50x1.2mm GROOVE TUBE x6.1M	POA	150MM APEX BRACKET 15 DEG (APX15015) (2 REQ)	$27.50 EA
100x50x1.2mm GROOVE TUBE x8M	POA	150MM APEX BRACKET 22.5 DEG (APX15022) (2 REQ)	$27.50 EA
150x50x1.5mm GROOVE TUBE x8M	POA	100/150 BEARER TO JOIST BRACKETS (JC100/150)	$10.63 EA
100MM FRAMING BRACKET 0 -5 DEG (FB100)	$6.91	100MM CORNER BRACKET	$18.15 EA
150MM FRAMING BRACKET 0-5 DEG (FB150)	$7.98 EA	150MM CORNER BRACKET	$18.55 EA
100MM ARCHITECTURAL FRAMING BRACKET 15 DEG (AFB10015)	$13.00 EA	100MM GROOVETUBE JOINER	$39.48 EA
100MM ARCHITECTURAL FRAMING BRACKET 22.5 DEG (AFB10022)	$14.30 EA	150MM GROOVETUBE JOINER	$42.98 EA
150MM ARCHITECTURAL FRAMING BRACKET 15 DEG (AFB15015)	$14.95 EA	75x75 POST TOP	$10.40 EA
150MM ARCHITECTURAL FRAMING BRACKET 22.5 DEG (AFB15022)	$23.98 EA	89x89 POST TOP	$13.00 EA
100MM APEX BRACKET 15 DEG (APX10015) (2 REQ)	$24.50 EA	FLOORING ADJUSTERS (FLA89)	$70.28 EA
100MM APEX BRACKET 22.5 DEG (APX10022) (2REQ)	$24.50 EA		

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