

## **TECHNICAL MANUAL**

### **STUDTEK Steel Top-hat Framing System**

- 1. Introduction**
- 2. Physical Properties**
- 3. Fire Performance**
- 4. Thermal Considerations**
- 5. Profile Sizes & Span Tables**
- 6. System Components**

#### **1.1 About This Manual:**

This manual has been developed to effectively assist fabricators and contractors to work with STUDTEK. Due to the uncontrollable conditions onsite and different methods of job scope, as well as the variable skills and judgment of installers and the quality of equipment, tools, etc, the suggestions and recommendations contained in this manual are provided without warranty. The information and recommendations herein are believed to be correct at time of publishing.

BLUECHIP reserves the right to revise the contents of this manual without prior notice. Any construction or use of the product must be in accordance with all local zoning and/or building codes and in accordance with the current NCC at the time of use. Except as contained in a written warranty certificate, the supplier does not provide any other warranty, either express or implied, and shall not be liable for any damages, including consequential damages.

#### **1.2 Company Background:**

Founded in 2003 by five brothers, BLUECHIP has grown every year since to become one of Australia's leading suppliers of architectural building envelopes. BLUECHIP's product range covers the complete system from the structure out including all types of cladding materials, composite decking, sub-framing, insulation, waterproofing and fixings.

With offices in Sydney, Melbourne and Perth, BLUECHIP has supplied more than 3,000,000m<sup>2</sup> of materials to Australian projects since 2003. Our commitment to innovation and ongoing investment in R&D ensures BLUECHIP will continue to lead the market with BCA/NCC compliant facade solutions in the years ahead.

For architects and consultants, BLUECHIP's wide range of different materials and 'complete-system' approach enables the creation of inspiring high-performance facades. For builders and contractors, BLUECHIP's large local stock, well established supply chains and genuine appreciation for our clients means you can trust us to deliver as promised every time.

#### **1.3 Company Details:**

Company: Blue Chip Group Pty Ltd  
ABN: 98 162 282 064  
Locations: Sydney | Melbourne | Brisbane | Perth  
Phone: 1300 945 123  
Email: [sales@bluechipgroup.net.au](mailto:sales@bluechipgroup.net.au)

**Important Note:** This document is not a substitute for project-specific structural engineering. Suitably qualified advice should be obtained for all projects which considers all relevant factors to determine structural loads, spans, fixings, etc, and to ensure suitability and compliance.



## 1.4 Product Description:

### Steel Top-hat Framing System

STUDTEK is a complete range of roll-formed steel sub-frame profiles designed for use with all types of cladding products. Including all different sizes of common profiles such as top-hats, c-channels and angles, STUDTEK also provides a highly versatile ventilated facade system which is widely used for installing many cladding panels such as through-colour fibre cement, high-pressure laminate and 9mm CFC. Supplied with all the required accessories such as backing strips, cavity closers and foam gaskets for weatherproofing, the STUDTEK facade system is manufactured from zinc-coated steel in accordance with ISO 9001 for long-term durability.

### Non-combustible

Made of 100% steel, STUDTEK steel cladding framing is deemed-to-satisfy non-combustible in accordance with NCC 2022, Clause C2D10(5)(b). STUDTEK foam gaskets and packers also comply with Clauses C2D10(4)(a) & C2D10(4)(i)(i).

### Zinc Durability

Manufactured from zinc-coated steel, the STUDTEK profiles offer superior corrosion resistance compared to common galvanised steel especially in coastal and marine environments.

### ISO 9001 Assurance

Roll-formed using the latest state-of-the-art computer controlled (CNC) machines in accordance with ISO 9001, you can be assured that all STUDTEK steel cladding framing conforms with exacting dimensional tolerances and specifications.

### Improved Strength

Not content with the common industry standard of 1.15BMT base-metal-thickness, key profiles in the STUDTEK range are made from stronger 1.20BMT steel to exceed normal engineering expectations and guarantee structural performance.

### Back-to-Back Warranty

When you specify STUDTEK with one of our many cladding products, we offer additional peace-of-mind by providing a back-to-back warranty covering the complete system from one supplier.

### The Complete System

Along with the STUDTEK steel cladding framing and associated accessories such as backing strips, foam gaskets and cavity closers, we can also supply; BICEP facade brackets, IROCK insulation and ULTRAPERM membrane for the complete system.

### All Cladding Types

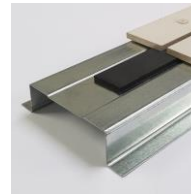
As one of Australia's largest cladding suppliers, we are in the ideal position to design and supply compatible sub-frame systems. From high-spec architectural facades to common commodity cladding, STUDTEK has all bases covered.

### Excellent Value

Superior zinc-coated finish and increased material base-metal-thickness (BMT) along with a manufacturer to industry direct supply chain means the STUDTEK facade system offers exceptional value-for-money to building owners.

## 1.5 More Information:

[STUDTEK Steel Top-hat Framing for Cladding](#)



## 2.1 Physical Properties – Steel Base Material:

STUDTEK steel base material and the roll-formed top-hat framing profiles are manufactured in accordance with international and Australian standards such as; DIN EN 10346, AS 1365, AS 1397 and ISO 9001 certified quality system for manufacturing processes.

ITEM	STANDARD	UNIT	RESULT
Base Metal Thickness (Top-hats)	Actual	mm	1.20 BMT
Material Density (Incl. Zinc-coating)	Actual	Kg/m <sup>3</sup>	8,092
Steel Thermal Expansion	Actual	mm/m/°C	0.012
Elongation on 80mm (>0.60mm)	Actual	%	<27
180° Transverse Bend (L-axis)	Actual	-	0t
Pittsburgh Lock-seam (<1.6mm)	Actual	-	Pass
Tensile Strength	EN 10346	MPa	270 – 500
Steel Chemical Composition:			
▪ Carbon (C)	EN 10346	%	<0.18
▪ Silicon (Si)	EN 10346	%	<0.50
▪ Magnesium (Mn)	EN 10346	%	<1.20
▪ Phosphorous (P)	EN 10346	%	<0.12
▪ Sulphur (S)	EN 10346	%	<0.045
▪ Titanium (Ti)	EN 10346	%	<0.30
Main Profiles Weight per Metre:			
▪ 120 x 35mm Joint Top-hat	Actual	Kg/m	2.35
▪ 50 x 50mm Standard Top-hat	Actual	Kg/m	1.85
▪ 50 x 35mm Standard Top-hat	Actual	Kg/m	1.55
▪ 50 x 24mm Standard Top-hat	Actual	Kg/m	1.34
▪ 50 x 15mm Standard Top-hat	Actual	Kg/m	1.17
▪ 75 x 75mm Angle (1.15BMT)	Actual	Kg/m	1.40
Main Profiles Weight per Length:			
▪ 120 x 35mm Joint Top-hat, 5.8m	Actual	Kg	13.63
▪ 50 x 50mm Top-hat, 5.8m	Actual	Kg	10.73
▪ 50 x 35mm Top-hat, 5.8m	Actual	Kg	8.99
▪ 50 x 24mm Top-hat, 5.8m	Actual	Kg	7.77
▪ 50 x 15mm Top-hat, 5.8m	Actual	Kg	6.79
▪ 75 x 75mm Angle (1.15BMT), 6.0m	Actual	Kg	8.40

## 2.2 Physical Properties – Zinc-Coating:

STUDTEK cold-rolled base steel material is hot-dipped with a continuous zinc-coating process by way of immersion in a bath of molten zinc to provide superior corrosion resistance in a wide range of construction framing applications.

ITEM	STANDARD	UNIT	RESULT
Zinc-coating Adhesion	Actual	-	0t
Coating Class - Standard	Actual	-	Z275
Surface Condition	Actual	-	Spangled
Surface Treatment	Actual	-	Passivated
Zinc-coating Mass (Both sides)	EN 10346	g/m <sup>2</sup>	>275
Zinc-coating Thickness Typical	EN 10346	μ	20
Zinc-coating Thickness Allowed Range	EN 10346	μ	13 – 27



### 3.1 Fire Performance – Steel Profiles:

ITEMS	COMPLIANCE
Top-hats Backing Strips Cavity Closer C-channels Angles	<p><b>Zinc-coated Steel:</b> Deemed-to-satisfy non-combustible in accordance with NCC 2022, Clause C2D10(5)(b), being entirely composed of steel including metallic coated steel (ie. Zinc-coating).</p> <p><b>Painted Steel:</b> Deemed-to-satisfy non-combustible in accordance with NCC 2022, Clause C2D10(6)(e), being a prefinished metal with a coating thickness &lt;1mm and spread-of-flame index of 0 when tested to AS 1530.3. (ie. Colorbond® Backing Strips)</p>

### 3.2 Fire Performance – Foam Gaskets:

ITEMS	COMPLIANCE
Foam Gaskets	The adhesive foam gaskets supplied with the STUDTEK Façade System for weatherproofing are exempted from the requirement to be non-combustible as per Clause C2D10(4)(a) which specifically exempts gaskets. See NCC 2022 extract below.

- (4) The requirements of (1) and (2) do not apply to the following:
- (a) Gaskets.

### 3.3 Fire Performance – Plastic Horseshoe Packers:

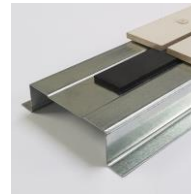
ITEMS	COMPLIANCE
Plastic Packers	The plastic horseshoe packers supplied as part of the STUDTEK system for using in 'isolation' to pack out and align the framing are exempted from the requirement to be non-combustible as per Clause C2D10(4)(i)(i). See NCC 2022 extract below.

- (4) The requirements of (1) and (2) do not apply to the following:
- (i) Isolated—
- (i) construction packers and shims; or

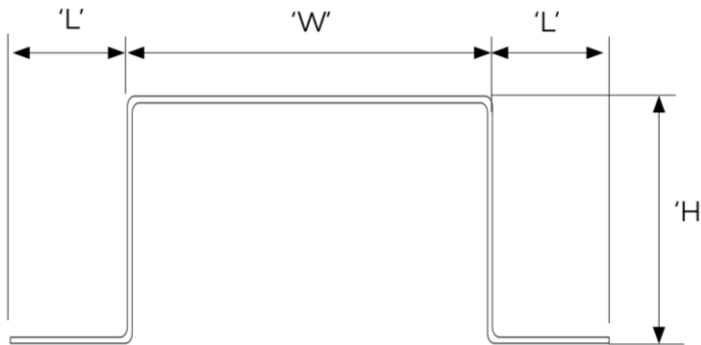
### 4.1 Thermal Considerations:

The thermal expansion and contraction of STUDTEK steel is relatively low at 0.012 mm/m/°C, however, as is the case with all steel or aluminium façade framing systems, this should always be taken into consideration when designing, using and/or installing framing systems.

NCC 2022 Section J, Clause J3D6 requires thermal breaks in building envelopes to achieve an R-value of not less than R0.2. If required for any given application or project, ensure a suitable structurally engineered thermal break is installed between the STUDTEK framing and structural steel for section J compliance.



### 5.1 Profile Sizes & Dimensions:



#### Standard Stock Profiles:

SIZE, LENGTH	CODE	BMT	WIDTH (W)	HEIGHT (H)	LEGS (L)
120 x 35mm, 5.8m	SZ1203558	1.20mm	120mm	35mm	20mm
50 x 50mm, 5.8m	SZ505058	1.20mm	50mm	50mm	20mm
50 x 35mm, 5.8m	SZ503558	1.20mm	50mm	35mm	20mm
50 x 24mm, 5.8m	SZ502458	1.20mm	50mm	24mm	20mm
50 x 15mm, 5.8m	SZ501558	1.20mm	50mm	15mm	20mm

#### Non-standard Profiles – Supply to Order:

SIZE	CODE	BMT	WIDTH (W)	HEIGHT (H)	LEGS (L)
All the above sizes in custom lengths, non-standard material or different BMT.					
75 x 50mm, 6.0m	SZ755060	1.15mm	75mm	50mm	20mm
75 x 35mm, 6.0m	SZ753560	1.15mm	75mm	35mm	20mm
75 x 24mm, 6.0m	SZ752460	1.15mm	75mm	24mm	17mm
75 x 15mm, 6.0m	SZ751560	1.15mm	75mm	15mm	15mm
75 x 50mm, 3.6m	SZ755036	1.15mm	75mm	50mm	20mm
75 x 35mm, 3.6m	SZ753536	1.15mm	75mm	35mm	20mm
74 x 24mm, 3.6m	SZ752436	1.15mm	75mm	24mm	17mm
75 x 15mm, 3.6m	SZ751536	1.15mm	75mm	15mm	15mm

### 5.2 Design Considerations & Span Tables:

#### Important Note:

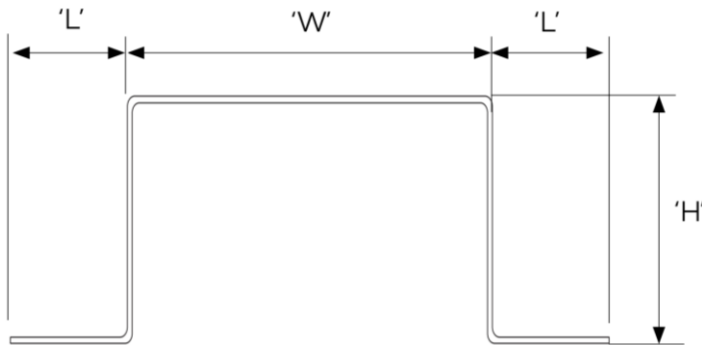
Blue Chip Group Pty Ltd has had these tables prepared by a third-party engineer for use by people skilled in the design and specification sub-frame systems. It accepts no responsibility for misinterpretation of the information provided and/or any errors or omissions. Users should satisfy themselves as to the suitability of the span tables for any application or project.

#### Notes Regarding Span Tables:

- \*UDC denotes the 'Ultimate Design Capacity' for the member (Maximum Carrying Load).
- All spans are in millimetres (mm) and design capacities are in KPa.
- Continuous span analysis assumes the long span being no more than 1.5 times as long as the short span. If spans exceed this, use the single span option.
- Capacities are developed on the assumption that the top-hats are fixed into at a minimum 300mm centres by the supported cladding system.
- Capacities are designed as per AS 4600 and loads are to be determined using AS 1170.
- Highlighted cells indicate where load exceeds the ultimate design capacity (UDC\*).
- Design capacities consider both inwards and outwards loadings with the lowest stated.



### STUDTEK 120 x 35mm Top-hat – Span Tables & Design Capacities:



SIZE, LENGTH	CODE	BMT	WIDTH (W)	HEIGHT (H)	LEGS (L)
120 x 35mm, 5.8m	SZ1203558	1.20mm	120mm	35mm	20mm

#### 450mm Centres:

SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	28.56	43.93	84.49	30.51	58.67
750	12.69	13.02	25.03	9.04	17.38
1000	7.14	5.49	10.56	3.81	7.33
1250	4.57	2.81	5.41	1.95	3.75
1500	3.17	1.63	3.13	1.13	2.17
1750	2.33	1.02	1.97	0.71	1.37
2000	1.78	0.69	1.32	0.48	0.92
2250	1.41	0.48	0.93	0.33	0.64

#### 600mm Centres:

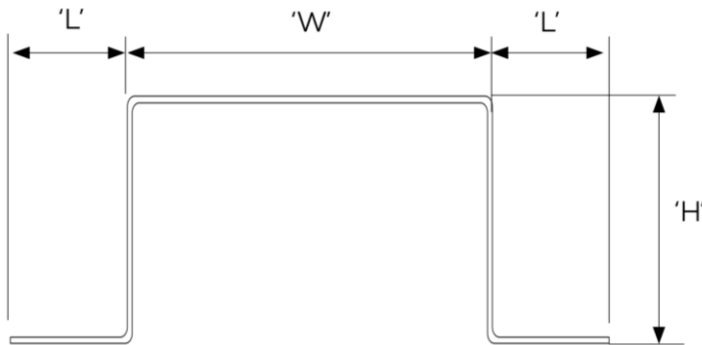
SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	21.42	32.95	63.37	22.88	44.00
750	9.52	9.76	18.77	6.78	13.04
1000	5.35	4.12	7.92	2.86	5.50
1250	3.43	2.11	4.06	1.46	2.82
1500	2.38	1.22	2.35	0.85	1.63
1750	1.75	0.77	1.48	0.53	1.03
2000	1.34	0.51	0.99	0.36	0.69
2250	1.06	0.36	0.70	0.25	0.48

#### Notes Regarding Span Tables:

- \*UDC denotes the 'Ultimate Design Capacity' for the member (Maximum Carrying Load).
- All spans are in millimetres (mm) and design capacities are in KPa.
- Continuous span analysis assumes the long span being no more than 1.5 times as long as the short span. If spans exceed this, use the single span option.
- Capacities are developed on the assumption that the top-hats are fixed into at a minimum 300mm centres by the supported cladding system.
- Capacities are designed as per AS 4600 and loads are to be determined using AS 1170.
- Highlighted cells indicate where load exceeds the ultimate design capacity (UDC\*).
- Design capacities consider both inwards and outwards loadings with the lowest stated.



### STUDTEK 50 x 50mm Top-hat – Span Tables & Design Capacities:



SIZE, LENGTH	CODE	BMT	WIDTH (W)	HEIGHT (H)	LEGS (L)
50 x 50mm, 5.8m	SZ505058	1.20mm	50mm	50mm	20mm

#### 450mm Centres:

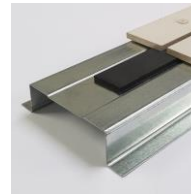
SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>31.34</b>	78.22	150.42	54.32	104.46
750	<b>13.93</b>	23.18	44.57	16.09	30.95
1000	<b>7.83</b>	9.78	18.80	6.79	13.06
1250	<b>5.01</b>	5.01	9.63	3.48	6.69
1500	<b>3.48</b>	2.90	5.57	2.01	3.87
1750	<b>2.56</b>	1.82	3.51	1.27	2.44
2000	<b>1.96</b>	1.22	2.35	0.85	1.63
2250	<b>1.55</b>	0.86	1.65	0.60	1.15

#### 600mm Centres:

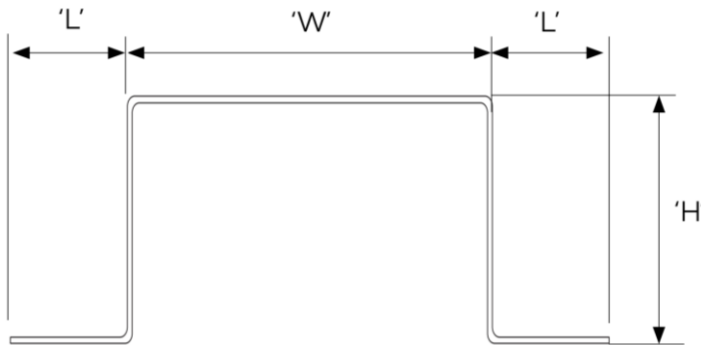
SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>23.50</b>	58.67	112.82	40.74	78.35
750	<b>10.45</b>	17.38	33.43	12.07	23.21
1000	<b>5.88</b>	7.33	14.10	5.09	9.79
1250	<b>3.76</b>	3.75	7.22	2.61	5.01
1500	<b>2.17</b>	2.17	4.18	1.51	2.90
1750	<b>1.37</b>	1.37	2.63	0.95	1.83
2000	<b>0.92</b>	0.92	1.76	0.64	1.22
2250	<b>0.64</b>	0.64	1.24	0.45	0.86

#### Notes Regarding Span Tables:

- \*UDC denotes the 'Ultimate Design Capacity' for the member (Maximum Carrying Load).
- All spans are in millimetres (mm) and design capacities are in KPa.
- Continuous span analysis assumes the long span being no more than 1.5 times as long as the short span. If spans exceed this, use the single span option.
- Capacities are developed on the assumption that the top-hats are fixed into at a minimum 300mm centres by the supported cladding system.
- Capacities are designed as per AS 4600 and loads are to be determined using AS 1170.
- Highlighted cells indicate where load exceeds the ultimate design capacity (UDC\*).
- Design capacities consider both inwards and outwards loadings with the lowest stated.



### STUDTEK 50 x 35mm Top-hat – Span Tables & Design Capacities:



SIZE, LENGTH	CODE	BMT	WIDTH (W)	HEIGHT (H)	LEGS (L)
50 x 35mm, 5.8m	SZ503558	1.20mm	50mm	35mm	20mm

#### 450mm Centres:

SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>18.08</b>	34.40	66.15	23.89	45.94
750	<b>8.04</b>	10.19	19.60	7.08	13.61
1000	<b>4.52</b>	4.30	8.27	2.99	5.74
1250	<b>2.89</b>	2.20	4.23	1.53	2.94
1500	<b>2.01</b>	1.27	2.45	0.88	1.70
1750	<b>1.48</b>	0.80	1.54	0.56	1.07
2000	<b>1.13</b>	0.54	1.03	0.37	0.72
2250	<b>0.89</b>	0.38	0.73	0.26	0.50

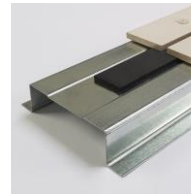
#### 600mm Centres:

SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>13.56</b>	25.80	49.61	17.19	34.45
750	<b>6.03</b>	7.64	14.70	5.31	10.21
1000	<b>3.39</b>	3.22	6.20	2.24	4.31
1250	<b>2.17</b>	1.65	3.18	1.15	2.20
1500	<b>1.51</b>	0.96	1.84	0.66	1.28
1750	<b>1.11</b>	0.60	1.16	0.42	0.80
2000	<b>0.85</b>	0.40	0.78	0.28	0.54
2250	<b>0.67</b>	0.28	0.54	0.20	0.38

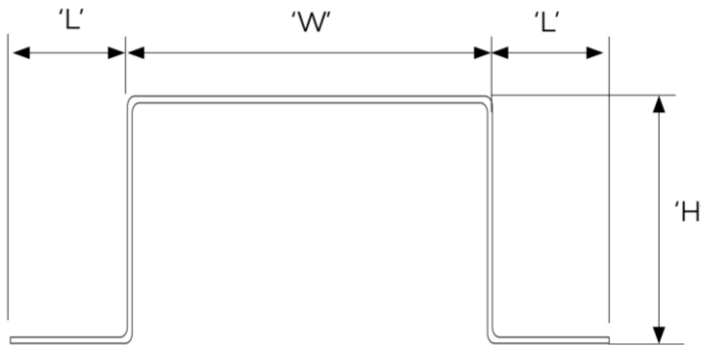
#### Notes Regarding Span Tables:

- \*UDC denotes the 'Ultimate Design Capacity' for the member (Maximum Carrying Load).
- All spans are in millimetres (mm) and design capacities are in KPa.
- Continuous span analysis assumes the long span being no more than 1.5 times as long as the short span. If spans exceed this, use the single span option.
- Capacities are developed on the assumption that the top-hats are fixed into at a minimum 300mm centres by the supported cladding system.
- Capacities are designed as per AS 4600 and loads are to be determined using AS 1170.
- Highlighted cells indicate where load exceeds the ultimate design capacity (UDC\*).
- Design capacities consider both inwards and outwards loadings with the lowest stated.





### STUDTEK 50 x 24mm Top-hat – Span Tables & Design Capacities:



SIZE, LENGTH	CODE	BMT	WIDTH (W)	HEIGHT (H)	LEGS (L)
50 x 24mm, 5.8m	SZ502458	1.20mm	50mm	24mm	20mm

#### 450mm Centres:

SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	9.36	14.43	27.75	10.02	19.27
750	4.16	4.28	8.22	2.97	5.71
1000	2.34	1.80	3.47	1.25	2.41
1250	1.50	0.92	1.78	0.64	1.23
1500	1.04	0.53	1.03	0.37	0.71
1750	0.76	0.34	0.65	0.23	0.45
2000	0.58	0.23	0.43	0.16	0.30
2250	0.46	0.16	0.30	0.11	0.21

#### 600mm Centres:

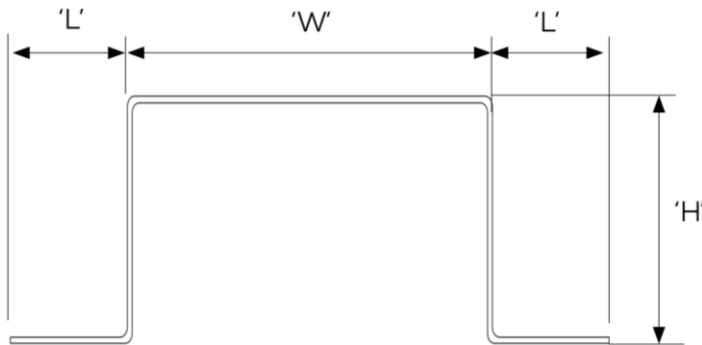
SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	7.02	10.82	20.81	7.52	14.45
750	3.12	3.21	6.17	2.23	4.28
1000	1.75	1.35	2.60	0.94	1.81
1250	1.12	0.69	1.33	0.48	0.92
1500	0.78	0.40	0.77	0.28	0.45
1750	0.57	0.25	0.49	0.18	0.34
2000	0.44	0.17	0.33	0.12	0.23
2250	0.35	0.12	0.23	0.08	0.16

#### Notes Regarding Span Tables:

- \*UDC denotes the 'Ultimate Design Capacity' for the member (Maximum Carrying Load).
- All spans are in millimetres (mm) and design capacities are in KPa.
- Continuous span analysis assumes the long span being no more than 1.5 times as long as the short span. If spans exceed this, use the single span option.
- Capacities are developed on the assumption that the top-hats are fixed into at a minimum 300mm centres by the supported cladding system.
- Capacities are designed as per AS 4600 and loads are to be determined using AS 1170.
- Highlighted cells indicate where load exceeds the ultimate design capacity (UDC\*).
- Design capacities consider both inwards and outwards loadings with the lowest stated.



### STUDTEK 50 x 15mm Top-hat – Span Tables & Design Capacities:



SIZE, LENGTH	CODE	BMT	WIDTH (W)	HEIGHT (H)	LEGS (L)
50 x 15mm, 5.8m	SZ501558	1.20mm	50mm	15mm	20mm

#### 450mm Centres:

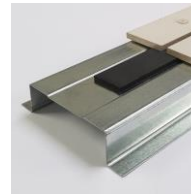
SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>3.83</b>	4.60	8.84	3.19	6.14
750	<b>1.70</b>	1.36	2.62	0.95	1.82
1000	<b>0.96</b>	0.57	1.11	0.40	0.77
1250	<b>0.61</b>	0.29	0.57	0.20	0.39
1500	<b>0.43</b>	0.17	0.33	0.12	0.23
1750	<b>0.31</b>	0.11	0.21	0.07	0.14
2000	<b>0.24</b>	0.07	0.14	0.05	0.10
2250	<b>0.19</b>	0.05	0.10	0.04	0.07

#### 600mm Centres:

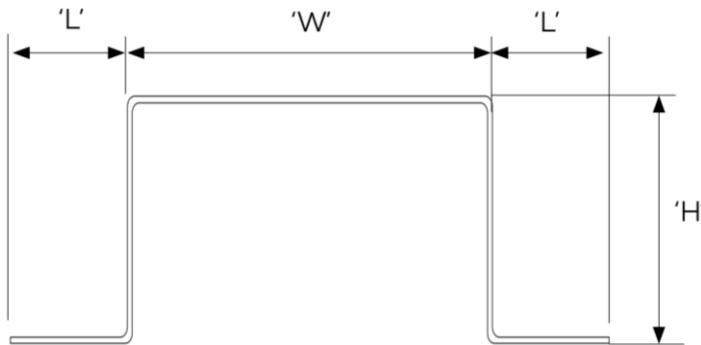
SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>2.87</b>	3.45	6.63	2.40	4.61
750	<b>1.28</b>	1.02	1.97	0.71	1.36
1000	<b>0.72</b>	0.43	0.83	0.30	0.58
1250	<b>0.46</b>	0.22	0.42	0.15	0.29
1500	<b>0.32</b>	0.13	0.25	0.09	0.17
1750	<b>0.23</b>	0.08	0.15	0.06	0.11
2000	<b>0.18</b>	0.05	0.10	0.04	0.07
2250	<b>0.14</b>	0.04	0.07	0.03	0.05

#### Notes Regarding Span Tables:

- \*UDC denotes the 'Ultimate Design Capacity' for the member (Maximum Carrying Load).
- All spans are in millimetres (mm) and design capacities are in KPa.
- Continuous span analysis assumes the long span being no more than 1.5 times as long as the short span. If spans exceed this, use the single span option.
- Capacities are developed on the assumption that the top-hats are fixed into at a minimum 300mm centres by the supported cladding system.
- Capacities are designed as per AS 4600 and loads are to be determined using AS 1170.
- Highlighted cells indicate where load exceeds the ultimate design capacity (UDC\*).
- Design capacities consider both inwards and outwards loadings with the lowest stated.



### STUDTEK 75 x 50mm Top-hat – Span Tables & Design Capacities:



SIZE, LENGTH	CODE	BMT	WIDTH (W)	HEIGHT (H)	LEGS (L)
75 x 50mm, 6.0m	SZ755060	1.15mm	75mm	50mm	20mm

#### 450mm Centres:

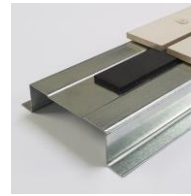
SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	42.47	92.18	177.26	64.01	123.10
750	18.88	27.31	52.52	18.97	36.47
1000	10.62	11.52	22.16	8.00	15.39
1250	6.80	5.90	11.34	4.10	7.88
1500	4.72	3.41	6.57	2.37	4.56
1750	3.47	2.15	4.13	1.49	2.87
2000	2.65	1.44	2.77	1.00	1.92
2250	2.10	1.01	1.95	0.70	1.35

#### 600mm Centres:

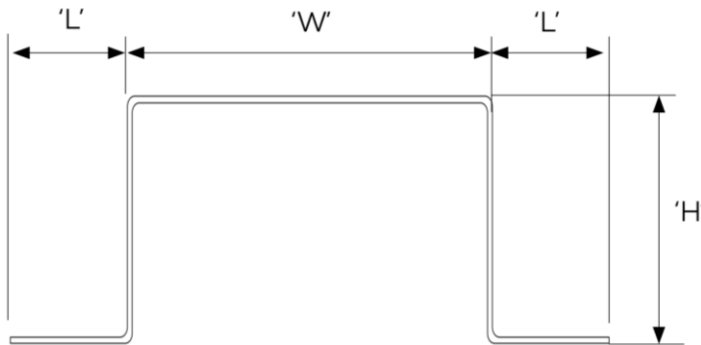
SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	31.86	69.13	132.95	48.01	92.33
750	14.16	20.48	39.39	14.22	27.36
1000	7.96	8.64	16.62	6.00	11.54
1250	5.10	4.42	8.51	3.07	5.91
1500	3.54	2.56	4.92	1.78	3.42
1750	2.60	1.61	3.10	1.12	2.15
2000	1.99	1.08	2.08	0.75	1.44
2250	1.57	0.76	1.46	0.53	1.01

#### Notes Regarding Span Tables:

- \*UDC denotes the 'Ultimate Design Capacity' for the member (Maximum Carrying Load).
- All spans are in millimetres (mm) and design capacities are in KPa.
- Continuous span analysis assumes the long span being no more than 1.5 times as long as the short span. If spans exceed this, use the single span option.
- Capacities are developed on the assumption that the top-hats are fixed into at a minimum 300mm centres by the supported cladding system.
- Capacities are designed as per AS 4600 and loads are to be determined using AS 1170.
- Highlighted cells indicate where load exceeds the ultimate design capacity (UDC\*).
- Design capacities consider both inwards and outwards loadings with the lowest stated.



### STUDTEK 75 x 35mm Top-hat – Span Tables & Design Capacities:



SIZE, LENGTH	CODE	BMT	WIDTH (W)	HEIGHT (H)	LEGS (L)
75 x 35mm, 6.0m	SZ753560	1.15mm	75mm	35mm	20mm

#### 450mm Centres:

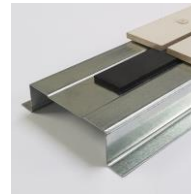
SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>25.07</b>	40.31	77.53	28.00	53.84
750	<b>11.14</b>	11.95	22.97	8.30	15.95
1000	<b>6.27</b>	5.04	9.69	3.50	6.73
1250	<b>4.01</b>	2.58	4.96	1.79	3.45
1500	<b>2.79</b>	1.49	2.87	1.04	1.99
1750	<b>2.05</b>	0.94	1.81	0.65	1.26
2000	<b>1.57</b>	0.63	1.21	0.44	0.84
2250	<b>1.24</b>	0.44	0.85	0.31	0.59

#### 600mm Centres:

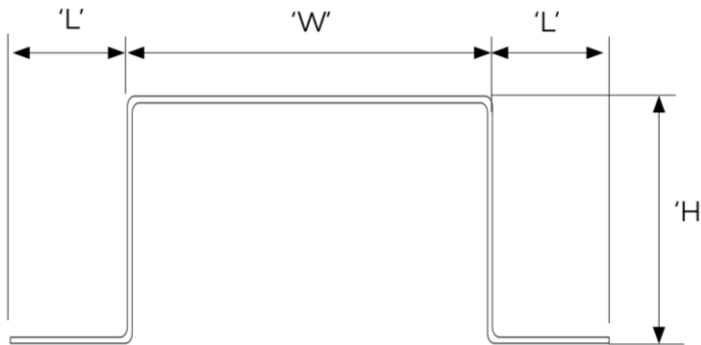
SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>18.80</b>	30.24	58.15	21.00	40.38
750	<b>8.36</b>	8.96	17.23	6.22	11.96
1000	<b>4.70</b>	3.78	7.27	2.62	5.05
1250	<b>3.01</b>	1.94	3.72	1.34	2.58
1500	<b>2.09</b>	1.12	2.15	0.78	1.50
1750	<b>1.54</b>	0.71	1.36	0.49	0.94
2000	<b>1.18</b>	0.47	0.91	0.33	0.63
2250	<b>0.93</b>	0.33	0.64	0.23	0.44

#### Notes Regarding Span Tables:

- \*UDC denotes the 'Ultimate Design Capacity' for the member (Maximum Carrying Load).
- All spans are in millimetres (mm) and design capacities are in KPa.
- Continuous span analysis assumes the long span being no more than 1.5 times as long as the short span. If spans exceed this, use the single span option.
- Capacities are developed on the assumption that the top-hats are fixed into at a minimum 300mm centres by the supported cladding system.
- Capacities are designed as per AS 4600 and loads are to be determined using AS 1170.
- Highlighted cells indicate where load exceeds the ultimate design capacity (UDC\*).
- Design capacities consider both inwards and outwards loadings with the lowest stated.



### STUDTEK 75 x 24mm Top-hat – Span Tables & Design Capacities:



SIZE, LENGTH	CODE	BMT	WIDTH (W)	HEIGHT (H)	LEGS (L)
75 x 24mm, 6.0m	SZ752460	1.15mm	75mm	24mm	17mm

#### 450mm Centres:

SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>13.96</b>	16.59	31.91	11.52	22.16
750	<b>6.20</b>	4.92	9.45	3.41	6.57
1000	<b>3.49</b>	2.07	3.99	1.44	2.77
1250	<b>2.23</b>	1.06	2.04	0.74	1.42
1500	<b>1.55</b>	0.61	1.18	0.43	0.82
1750	<b>1.14</b>	0.39	0.74	0.27	0.52
2000	<b>0.87</b>	0.26	0.50	0.18	0.35
2250	<b>0.69</b>	0.18	0.35	0.13	0.24

#### 600mm Centres:

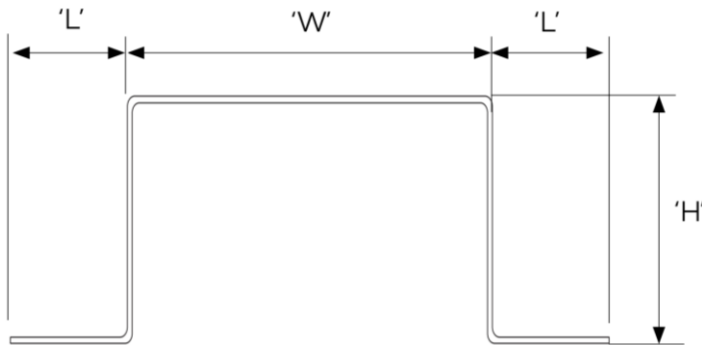
SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>10.47</b>	12.44	23.92	8.64	16.62
750	<b>4.65</b>	3.69	7.09	2.56	4.92
1000	<b>2.62</b>	1.56	2.99	1.08	2.08
1250	<b>1.67</b>	0.80	1.53	0.55	1.06
1500	<b>1.165</b>	0.46	0.89	0.32	0.62
1750	<b>0.85</b>	0.29	0.56	0.20	0.39
2000	<b>0.65</b>	0.19	0.37	0.14	0.26
2250	<b>0.52</b>	0.14	0.26	0.09	0.18

#### Notes Regarding Span Tables:

- \*UDC denotes the 'Ultimate Design Capacity' for the member (Maximum Carrying Load).
- All spans are in millimetres (mm) and design capacities are in KPa.
- Continuous span analysis assumes the long span being no more than 1.5 times as long as the short span. If spans exceed this, use the single span option.
- Capacities are developed on the assumption that the top-hats are fixed into at a minimum 300mm centres by the supported cladding system.
- Capacities are designed as per AS 4600 and loads are to be determined using AS 1170.
- Highlighted cells indicate where load exceeds the ultimate design capacity (UDC\*).
- Design capacities consider both inwards and outwards loadings with the lowest stated.



### STUDTEK 75 x 15mm Top-hat – Span Tables & Design Capacities:



SIZE, LENGTH	CODE	BMT	WIDTH (W)	HEIGHT (H)	LEGS (L)
75 x 15mm, 6.0m	SZ751560	1.15mm	75mm	15mm	15mm

#### 450mm Centres:

SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>6.01</b>	5.25	10.10	3.65	7.01
750	<b>2.67</b>	1.56	2.99	1.08	2.08
1000	<b>1.50</b>	0.66	1.26	0.46	0.88
1250	<b>0.96</b>	0.34	0.65	0.23	0.45
1500	<b>0.67</b>	0.19	0.37	0.14	0.26
1750	<b>0.49</b>	0.12	0.24	0.09	0.16
2000	<b>0.38</b>	0.08	0.16	0.06	0.11
2250	<b>0.30</b>	0.06	0.11	0.04	0.08

#### 600mm Centres:

SPAN (mm)	UDC* (KPa)	SPAN / 250		SPAN / 360	
		Single Span	Continuous	Single Span	Continuous
500	<b>4.51</b>	3.94	7.57	2.73	5.26
750	<b>2.00</b>	1.17	2.24	0.81	1.56
1000	<b>1.13</b>	0.49	0.95	0.34	0.66
1250	<b>0.72</b>	0.25	0.48	0.17	0.34
1500	<b>0.50</b>	0.15	0.28	0.10	0.19
1750	<b>0.37</b>	0.09	0.18	0.06	0.12
2000	<b>0.28</b>	0.06	0.12	0.04	0.08
2250	<b>0.22</b>	0.04	0.08	0.03	0.06

#### Notes Regarding Span Tables:

- \*UDC denotes the 'Ultimate Design Capacity' for the member (Maximum Carrying Load).
- All spans are in millimetres (mm) and design capacities are in KPa.
- Continuous span analysis assumes the long span being no more than 1.5 times as long as the short span. If spans exceed this, use the single span option.
- Capacities are developed on the assumption that the top-hats are fixed into at a minimum 300mm centres by the supported cladding system.
- Capacities are designed as per AS 4600 and loads are to be determined using AS 1170.
- Highlighted cells indicate where load exceeds the ultimate design capacity (UDC\*).
- Design capacities consider both inwards and outwards loadings with the lowest stated.



## 6.1 Acceptable System Components:

### Cavity Closer:

CODE	DESCRIPTION
SCC60	STUDTEK 35 x 35mm Cavity Closer (0.55BMT), 6.0m Length



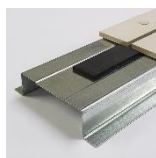
### Backing Strip:

CODE	DESCRIPTION
SJS359	STUDTEK 67 x 3.5mm Black Backing Strip (0.48BMT), 3.59m Length
SJS299	STUDTEK 67 x 3.5mm Black Backing Strip (0.48BMT), 2.99m Length



### Adhesive Foam Gaskets:

CODE	DESCRIPTION
TFG4048	STUDTEK 40 x 4.8mm EPDM Vertical Joint Gasket, 15m Roll
TFG4032	STUDTEK 40 x 3.3mm EPDM Vertical Joint Gasket, 25m Roll
TFG1232	STUDTEK 12 x 3.2mm EPDM Intermediate Gasket, 25m Roll



### Sarking:

The sarking shall be ULTRAPERM vapour permeable membrane which is; deemed-to-satisfy 'non-combustible' as per NCC 2022 Clause C2D10(6)(f), is AS 4200.1 compliant and classified as a 'water barrier' as per NCC 2022 Clauses F3D3 and F8D3(1), is classified as 'class 4 vapour permeable' for compliant use in all climate zones 1-8 as per NCC 2022 Clauses F8P1 and F8D3(2), and is installed in accordance with AS 4200.2 for deemed-to-satisfy weatherproofing.

CODE	DESCRIPTION
UPS15030	ULTRAPERM 511 Class 4 Membrane (Grey), 1.5 x 30m Roll
IR601260	ULTRAPERM 531 Class 4 Membrane (Blue), 1.5 x 50m Roll

