

**EZYBUILD**<sup>®</sup>

S O L U T I O N S

SMARTRUSS<sup>®</sup>  
Trusted roof  
support solutions

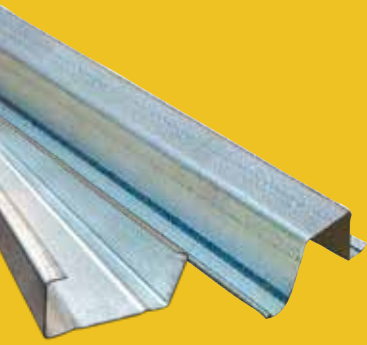


Strong & Durable | Extreme Corrosion Resistance | Maintenance Free  
Construction with Ease & Speed | Fire Resistant

  
**TATA BLUESCOPE  
STEEL**

*Leaders in Colour Coated Roofing & Cladding Solutions*

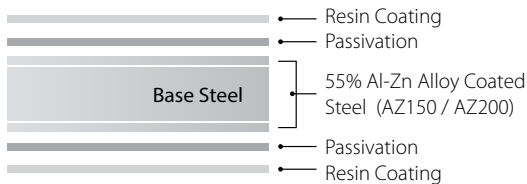




SMARTRUSS® solution from Tata BlueScope Steel is an advanced, lightweight framing technology for all your roof support solutions!

Anganwadi, Purnia

## What makes SMARTRUSS® a Truly Smart Solution?



Cross Sectional View of ZINCALUME® steel

SMARTRUSS® members are made from ZINCALUME® steel which is zinc and aluminum alloy coated steel with AZ150 coating mass with yield strength of 550 MPa. On an average ZINCALUME® steel (AZ150 coating) lasts up to four times longer than galvanized (zinc coated Z275 coating) steel in similar environmental condition.

## Advantage of SMARTRUSS®

### Why SMARTRUSS®



- Fasteners system, safe to erect
- Easy and quick to install



- Light-weight, easy to handle and erect



- No painting required
- ZINCALUME® steel structural members last longer & give seamless construction

### Why not Mild Steel



- Lesser safety during site fabrication
- Requires welding
- Needs skilled labour



- Heavy steel sections are difficult to handle and erect



- Requires painting to protect steel from corrosion
- Higher maintenance cost

### Why not Timber



- Material inconsistency



- Affected by termites



- Highly inflammable

# SMARTRUSS®

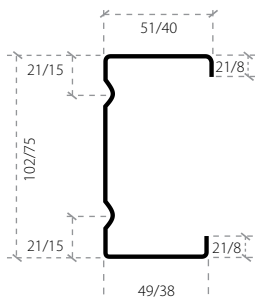
## Design Advantage

SMARTRUSS® system has been extensively tested in BlueScope Steel's R&D laboratory, Australia & is fully computer designed with SUPRACADD™ software linked to sophisticated Computer Aided Manufacturing, ensuring faster, accurate & consistent project delivery.

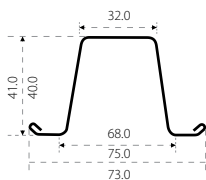
SMARTRUSS® designs conforms to established International Standards and Design Codes.



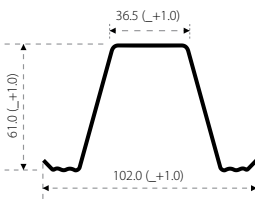
### Unique Components



S100 / S75 Section



Top Span 40



Top Span 61

All dimensions are in mm.

### Technical Properties

| Description   | Name | Units           | S75 x 0.75 Full Section | S75 x 1.0 Full Section | S100 x 1.0 Full Section |
|---|------|-----------------|-------------------------|------------------------|-------------------------|
| Area  | A    | mm <sup>2</sup> | 122.3                   | 159.01                 | 216                     |
| Moment of Inertia                                   | Ixx  | mm <sup>2</sup> | 112700                  | 143109                 | 362000                  |
| Moment of Inertia                                   | Iyy  | mm <sup>2</sup> | 23860                   | 26467                  | 71330                   |
| Modulus of Section                                  | Zxx  | mm <sup>2</sup> | 2998                    | 3772.0                 | 7102                    |
| Modulus of Section                                  | Zyy  | mm <sup>2</sup> | 879.3                   | 1016.7                 | 2070                    |
| Radius of Gyration                                  | Rxx  | mm              | 30.35                   | 30.00                  | 40.94                   |
| Radius of Gyration                                  | Ryy  | mm              | 13.96                   | 12.9                   | 18.17                   |
| Torsion Constant                                    | J    | mm <sup>4</sup> | 22.94                   | 53.00                  | 72.01                   |
| Warping Constant                                    | Iw   | mm <sup>6</sup> | 26300000                | 28827974               | 150300000               |
| Shear Centre Co-ordinate                            | Yo   | mm              | 1.072                   | 1.827                  | 1.185                   |
| Yield strength                                      | fy   | MPa             | 550                     | 550                    | 550                     |
| Design Strength in tension, compression and bending | f    | MPa             | 425                     | 425                    | 472                     |
| Design strength in shear                            | fv   | MPa             | 245                     | 245                    | 275                     |

### Various Roofing Options



Also compatible with other roofing options such as shingles etc.

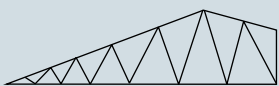
### Types of Trusses



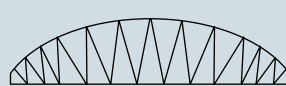
Symmetrical



Monoslope Truss



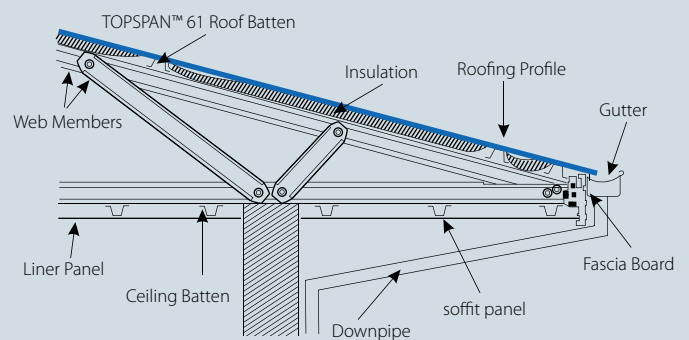
Truncated Truss



Radial Truss

Drawings are indicative only.

### Cross section of SMARTRUSS® roofing solution



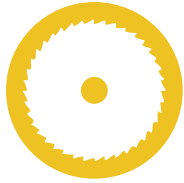


# Smart Steps of Construction Process

Designed with minimum fabrication tools



Drill Gun



Rotary Disk Cutter



Hand Shearer

SMARTRUSS® solution components are light weight with high strength.

The solution is based on lean construction methodology which ensures:

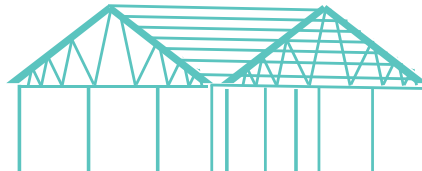
- Speedy Construction
- Early Utilization
- Faster Returns



**1** Using top and bottom chord, create the triangle frame of the truss



**2** Install subsequent trusses over the truss template



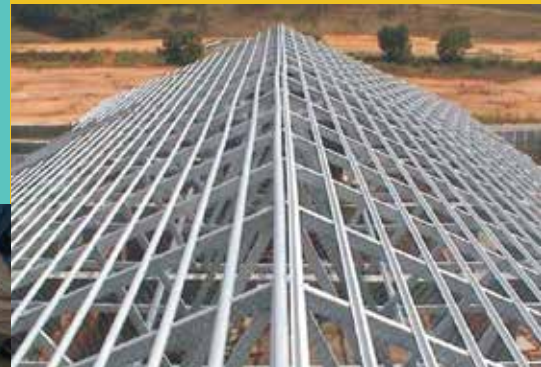
**3** Use drill gun to fasten the screw at the bottom chord and web members



**4** Install L-Brackets to the beam and fix trusses to the L-Bracket using self tapping fasteners



**5** Fix battens to the trusses with recommended spacing



**6** Finished roof trusses are ready for roofing





Resorts, Bhubaneswar

# Resorts

Design flexibility offers variety of truss shapes desired by upscale & elegant resorts.

**Roof Tops**  
Versatile usage of material ensures covering up each unused space on terraces.



IIT Madras



Farm House, Indore



Anganwadi, Purnia

**Residential**  
Weekend homes concept are now a reality with assured & safe solutions.

**Anganwadi**  
Ideal solution for infrastructure applications.



CP Aqua, Pondicherry

**Fish Culture Sheds**  
ZINCALUME® steel members ensure durable & quick solution for large fish culture farms.

**Poultry Farms**  
Agro businesses are now modern and equipped with state of the art infrastructure



Poultry farm, Chennai





**Conventional**

**VS**

**EZYBUILD®**



### Design

With EZYBUILD® one can build variety of structures along with integration on existing ones



**3 months to 2+ Year**

### Timelines

The time from the start of construction work to completion



**4 weeks to 2 months**



### Construction Costs

Cost of construction for EZYBUILD® structures is upto 35% lesser compared to traditional ones



### Maintenance

EZYBUILD® technology assures least maintenance



### Green Solutions

EZYBUILD® solutions are reusable, recyclable and 100 % lead free



### Flexibility

EZYBUILD® modular buildings are versatile in terms of expansion and relocation



Explore More



EZYBUILD® Solutions are available through Authorised EZYBUILD® Solution Partners

**Toll Free: 1800 2708333**

**Email: [contact@tatabluescopesteel.com](mailto:contact@tatabluescopesteel.com)**

Note:

©2023 Tata BlueScope Steel Pvt. Ltd. All rights reserved. This brochure and its content is copyright of Tata BlueScope Steel Pvt. Ltd. No part of this brochure may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopy, recording, or any information storage and retrieval system, without permission in writing from Tata BlueScope Steel Pvt. Ltd.

All brand names mentioned in this brochure are registered trademarks of BlueScope Steel Limited under license to Tata BlueScope Steel Pvt. Ltd.

Authorised EZYBUILD® Solutions Provider



**TATA BLUESCOPE STEEL**

Tata BlueScope Steel Pvt. Ltd.  
CIN : U45209PN2005PTC020270,  
Floor no. 9 & 10, Kalpataru Infinia, Wakedwadi, Final Plot  
no. 21, Sub plot no. 3 at CTS no. 15/1 Shivajinagar, Pune  
- 411003, India. | Tel: +91 20 6621 8000  
Website: [www.tatabluescopesteel.com](http://www.tatabluescopesteel.com)