



**KEBS STANDARD**  
**KS 2971:2023:** Standard Specifications  
for Design of Cold-Formed Buildings



Built for Generations



# TOOL KIT

 **SAFAL**  
Building Systems Ltd.  
(100% Subsidiary of MRM)



# What is SAFBUILD®?

SAFBUILD®, the world-class pre-engineered steel buildings solution are prefabricated cold-formed light gauge steel structures that are easy to assemble on site. SAFBUILD® structures are delivered as a complete solution, effectively reducing the overall cost of construction and project duration, from procurement to construction.

We use high-tensile galvanized steel on our pre-engineered structures to ensure durability and maximum strength.

# Why SAFBUILD®?

- Stress free construction
- Eco-friendly
- Much more durable due to galvanisation
- Speed of execution as materials are factory cut for fast erection on site
- The entire process is handled by experts

Ready-made	Bespoke
Offers standardised sizes	Customer-defined sizes that are made to order
Faster delivery of 30-days from order to supply	It takes approximately six to eight weeks from order to supply
Optimised design at competitive pricing	Allows optimisation of design for only a slight cost increase
Features standard sizes that allow easy adoption to most land sizes	Customised to fit use and/or the land available

# Available Colours

Maroon

Sky Blue

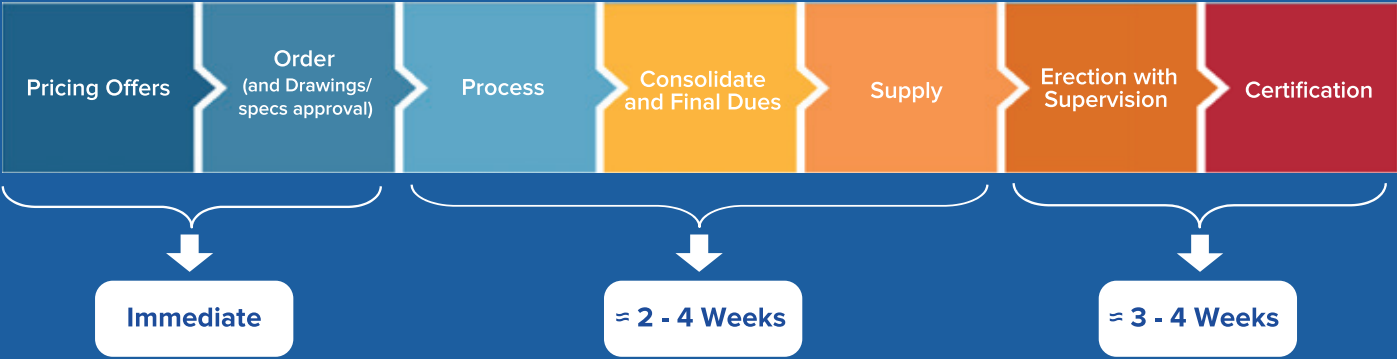
Dark Green

Lilac Haze

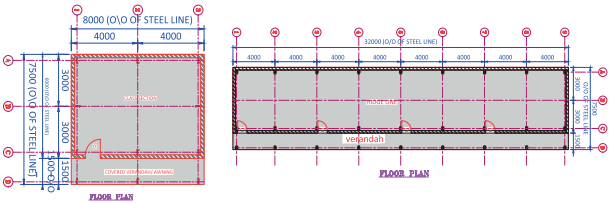
Charcoal Grey

Other shades may be offered based on availability but this may impact delivery timelines

# 30 Days Explained



# Classrooms



## Building Size (M)

Single Classroom	8W x 9L x 3H (85.5 M <sup>2</sup> )
Multiple (4 Unit) Block	8W x 36L x 3H (342 M <sup>2</sup> )
Sitting Capacity	Private - 40 Students MOE - 55 Students

## Ministry Of Education Recommended Size Classrooms – Single Unit & 4-classroom Block

Building Dimensions – Includes a 1.5M wide verandah					SAFBUILD® Cladding		Structure weight (MT)
No	Width (m)	Length (m)	Height (m)	Area (M <sup>2</sup> )	Nature	Type	
1	8 (9.5)	9	3	85.5	Roof & Wall (1.8m steel, 1.2m masonry)	Tekdek ITS 0.40TCT	1.90
2	8 (9.5)	36	3	342	Roof & Wall (1.8m steel, 1.2m masonry)	Tekdek ITS 0.40TCT	6.47

## Private Sector-preferred Size Classrooms – Single Unit & 4-classroom Block

Building Dimensions – Includes a 1.5M wide verandah					SAFBUILD® Cladding		Structure weight (MT)
No	Width (m)	Length (m)	Height (m)	Area (M <sup>2</sup> )	Nature	Type	
1	6 (7.5)	8	3	60	Roof & Wall (1.8m steel, 1.2m masonry)	Tekdek ITS 0.40TCT	1.32
2	6 (7.5)	32	3	240	Roof & Wall (1.8m steel, 1.2m masonry)	Tekdek ITS 0.40TCT	4.54

## Building Offer Inclusions

1. Complete steel structure
2. Roofing & Cladding Sheets
3. Complete Rain Water Goods
4. Opening-support Frames & accessories
5. Insulation under roof
6. Installation labour
7. Transportation\* to project sites
8. Area includes 1.5M verandah

## Building Offer Exclusions

1. Civil, Mechanical, Electrical & other builder works
2. Optional Accessories - louvres, doors, windows etc
3. Professional services/ statutory approvals



# Warehouse



## Building Size (M)

Warehouse 1 (Small)	10W x 20L x 4.5H (200 M <sup>2</sup> )
Warehouse 2 (Large)	15W x 30L x 6H (450 M <sup>2</sup> )*

\*Sits on a 50 x 100 plot

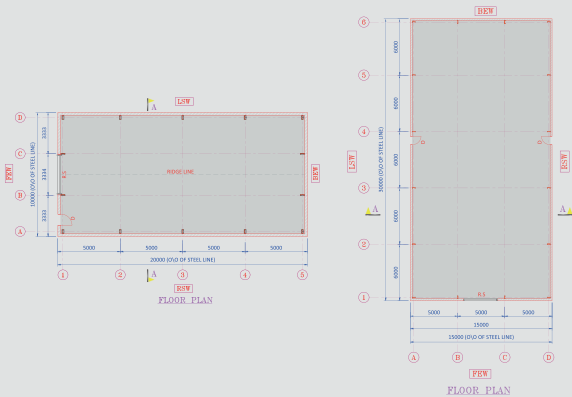
Building Dimensions					SAFBUILD® Cladding		Structure weight (MT)
No	Width (m)	Length (m)	Height (m)	Area (M <sup>2</sup> )	Nature	Type	
1	10	20	4.5	200	Roof & Wall (2.0m steel, 2.5m masonry)	Tekdek IT5 0.40TCT	4.38
2	15	30	6	450	Roof & Wall (3.0m steel, 3.0m masonry)	Tekdek IT5 0.40TCT	9.66

## Warehouse Offer Inclusions

1. Complete steel structure
2. Roofing & Cladding Sheets
3. Complete Rain Water Goods
4. Opening-support Frames & accessories
5. Polycarbonate Sheets (1 per bay)
6. Installation labour
7. Transportation\* to project sites

## Warehouse Offer Exclusions

1. Civil, Mechanical, Electrical & other builder works
2. Optional Accessories- louvres, doors, windows etc
3. Professional services/ statutory approvals



# Church



## Building Size (M)

Church 1 (Medium Unit)	12W x 24L x 4H (288 M <sup>2</sup> )
Church 2 (Large Unit)	15W x 30L x 5H (450 M <sup>2</sup> )
Sitting Capacity	Church 1 - 200 pax Church 2 - 300 pax

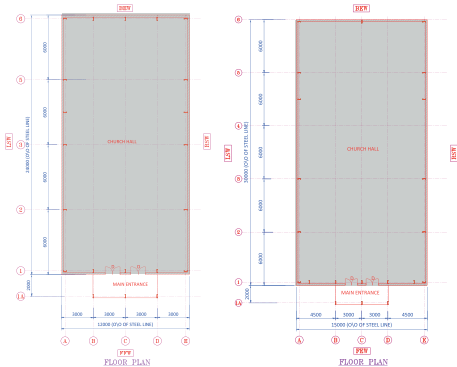
Building Dimensions					SAFBUILD® Cladding		Structure weight (MT)
No	Width (m)	Length (m)	Height (m)	Area (M <sup>2</sup> )	Nature	Type	
1	12	24	4	288	Roof & Wall (2.5m steel, 1.5m masonry)	Tekdek ITS 0.40TCT	6.35
2	15	30	5	450	Roof & Wall (3.5m steel, 1.5m masonry)	Tekdek ITS 0.40TCT	10.56

## Church Offer Inclusions

1. Complete steel structure
2. Roofing & Cladding Sheets
3. Complete Rain Water Goods
4. Opening-support Frames & accessories
5. Insulation under roof
6. Installation labour
7. Transportation\* to project sites

## Church Offer Exclusions

1. Civil, Mechanical, Electrical & other builder works
2. Optional Accessories - Louvres, doors, windows etc
3. Professional services/ statutory approvals



# Commercial Kiosk



## Building Size (M)

Commercial Kiosk(4units)	3W X 12L X 3H (36M <sup>2</sup> )*
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\*25% Larger than a 40ft container

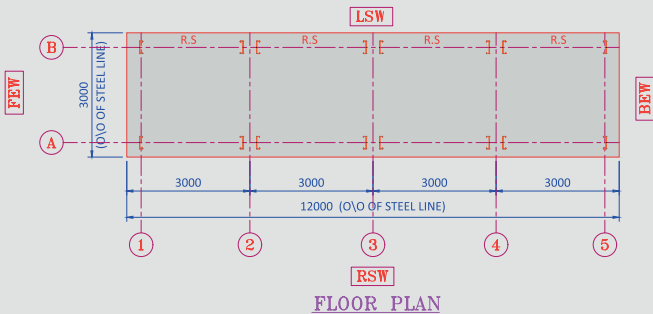
Building Dimensions					SAFBUILD® Cladding		Structure weight (MT)
No	Width (m)	Length (m)	Height (m)	Area (M <sup>2</sup> )	Nature	Type	
1	3	12	3	36	Roof & Wall (Full steel wall cladding)	Tekdek IT5 0.40TCT	1.80

## Commercial kiosk Offer Inclusions

1. Complete steel structure
2. Roofing & Cladding Sheets
3. Complete Rain Water Goods
4. Opening-support Frames & accessories
5. Insulation under roof
6. Installation labour
7. Transportation\* to project sites

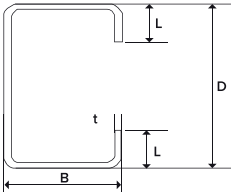
## Commercial kiosk Offer Exclusions

1. Civil, Mechanical, Electrical & other builder works
2. Optional Accessories - louvres, doors, windows etc
3. Professional services/ statutory approval

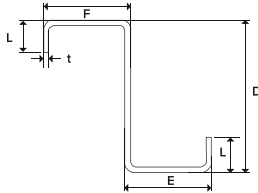


# Purlin Dimensions & Properties

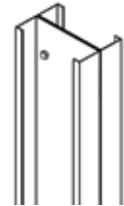
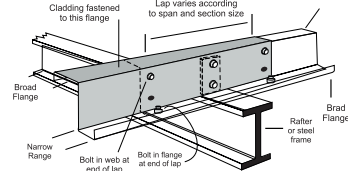
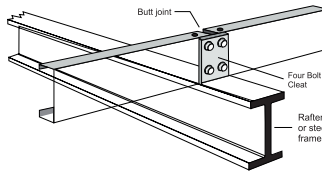
C Purlin



Z Purlin



Typical Connection



## C & Z Purlin Size & Mass Table

Section	Thickness mm (t)	Height mm (D)	Z PURLINS			C PURLINS		Mass kg/m
			E	F	L	B	L	
10012*	1.20	102	53	49	13	51	12.5	2.07
15012*	1.20	152	65	61	15.5	64	14.5	2.82
15016	1.60	152	65	61	16.5	64	15.5	3.74
15024	2.40	152	66	60	19.5	64	18.5	5.61
20016	1.60	203	79	74	18	76	15.5	4.92
20019	1.90	203	79	74	18.5	76	19	5.64
20024	2.40	203	79	73	21.5	76	21	7.14
25019	1.90	254	79	74	18	76	18.5	6.38
25024	2.40	254	79	73	21	76	20.5	8.08
30024	2.40	300	100	93	27	96	27.5	9.95

Tolerances	Benefits	Material specifications
<ul style="list-style-type: none"><li>Overall length = <math>\pm 5</math>mm</li><li>Flange width = <math>\pm 1</math>mm</li><li>Web depth = <math>\pm 1</math>mm</li><li>Hole centres = <math>\pm 1.5</math>mm</li></ul>	<ul style="list-style-type: none"><li>Greater spanning capacity</li><li>Easier to handle</li><li>Lower maintenance cost</li><li>Quick &amp; Easy installation</li><li>Compatibility with other steel products</li></ul>	<ul style="list-style-type: none"><li>G450, Z275 - thickness greater than or equal to 1.5mm</li><li>G500, Z275 - thickness greater than 1.0mm &amp; less than 1.5mm</li><li>G550, Z275 - thickness less than or equal to 1.0mm</li></ul>

\* MOQ requirement is 5MT and the lead time is 3-4 weeks

\*Transportation - FREE within Nairobi and at discounted rates outside Nairobi





Built for Generations

# TALK TO US



Talk to us today!  
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