

欲しい 屋根, 欲しい Rofo  
**Think Roof, Think Rofo.™**  
Quality • Innovative • Service • System

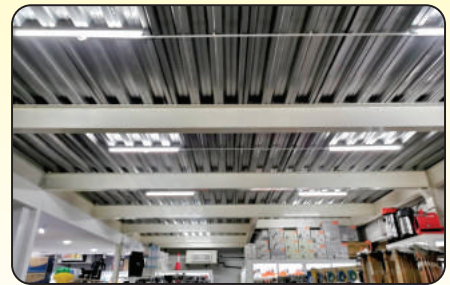
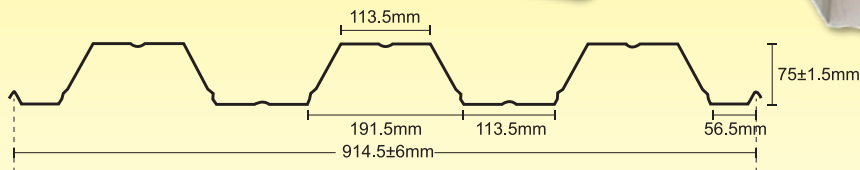
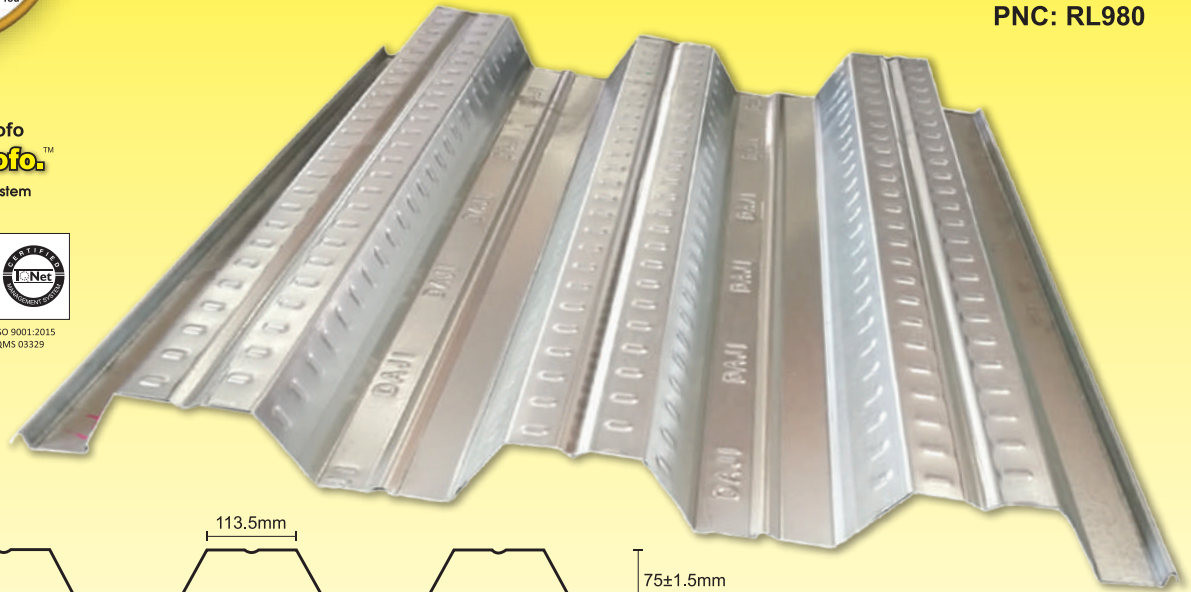


CERTIFIED TO ISO 9001:2015  
CERT. NO.: QMS 03329



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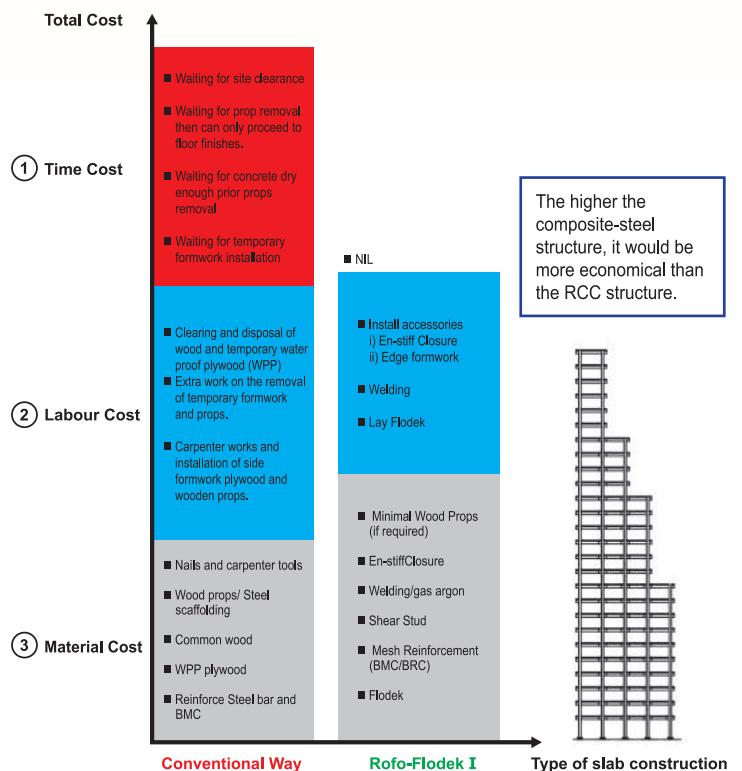
**CIDB MALAYSIA**  
IBS Status Manufacturer  
No. 5216  
Registration  
No. 0120101203-SB131898



## 1. Advantages

## 2. Cost

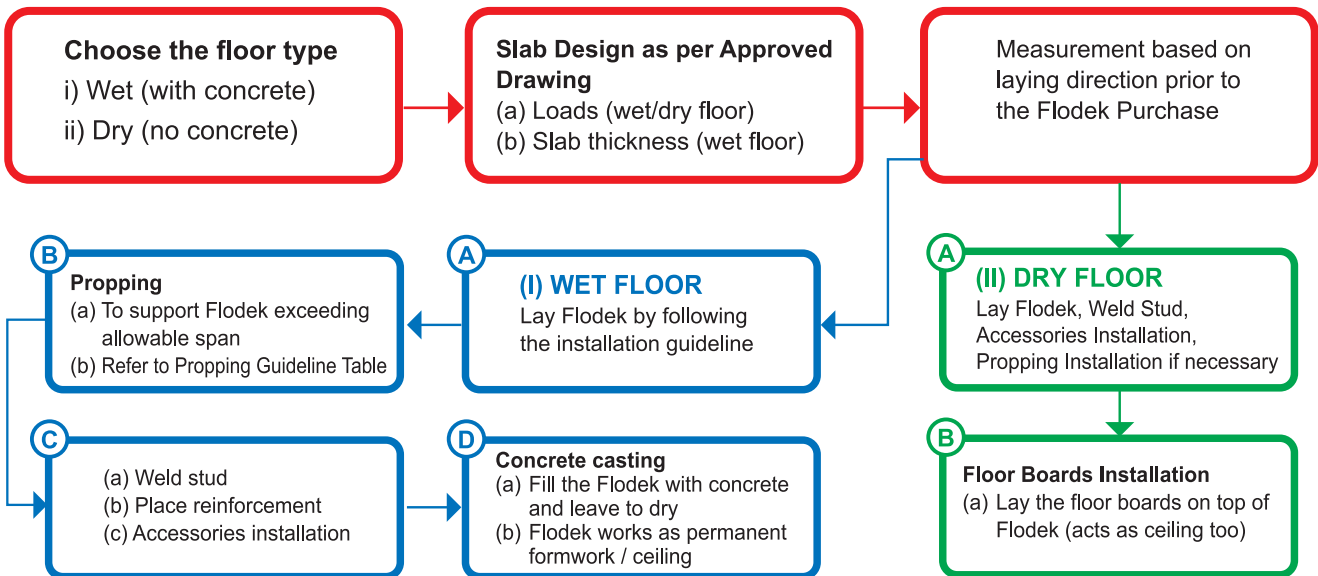
- ① **Total Cost Saving**
- ② **No messy prop & save cost of props**
- ③ **Min props up to 4 m span (during construction)**
- ④ **Fast Concreting**
- ⑤ **Clean, no leakage and cement waste**
- ⑥ **Act as Permanent Formwork & No Need to Remove**
- ⑦ **Reduce Incident Injury/safety**
- ⑧ **Wet Floor**
- ⑨ **Use as Dry floor & Ceiling**
- ⑩ **Wide Spanning Ability after dry**
- ⑪ **Daji 大吉**
- ⑫ **Save foundation cost and increase space**



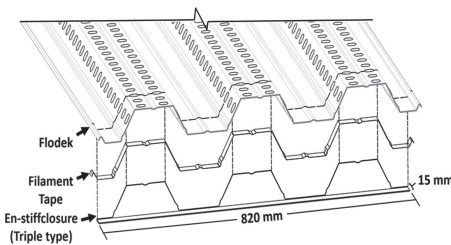
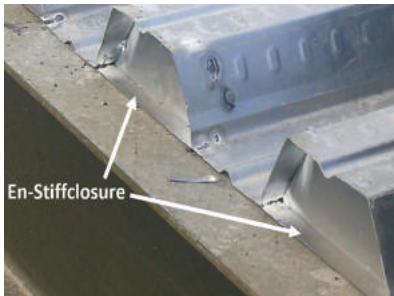
### Cost Comparison of Slab Constructions

Note: The cost comparison is in indicative scale, exact comparison is subjected to final engineered design.

### 3. Application Flow



### 4. Accessories



#### a) En-Stiffclosure & Filament Tape

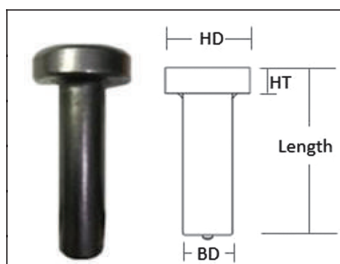
- En-stiffclosure acts as a barrier to fill the space at the bottom of Flodek, to further strengthen the edge of Flodek
- Filament Tape secures and fits in the space between Flodek and en-stiffclosure

#### b) End Cap Accessories E3

- Cover the edge of Flodek before concrete casting
- Available thickness: 1.0mm, 1.2mm

#### c) Shear Stud

- Provide additional longitudinal shear resistance for composite slab
- Improve the composite action between concrete and Flodek



Type	1	2	3
Material Grade	Min. 350 MPa		
Length (mm)	65	81	105
Head Diameter, HD (mm)	32		
Head Thickness, HT (mm)	10		
Body Diameter, BD (mm)	19		

#### Standards

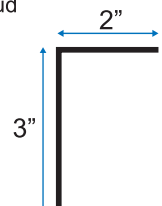
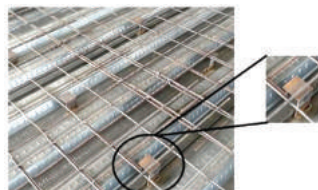
- AWS D1.1/ D1.1M-2006
- DIN EN ISO 13918 (Stud Welding Standard)

#### Specifications

- Spacing of studs = 95mm c/c
- Installation Method = Electric Arc Stud Welding; Gas Shielding Arc Stud Welding

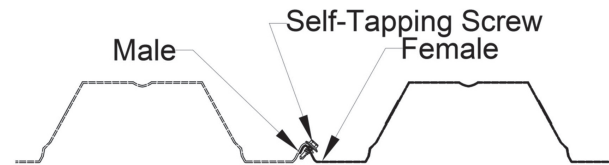
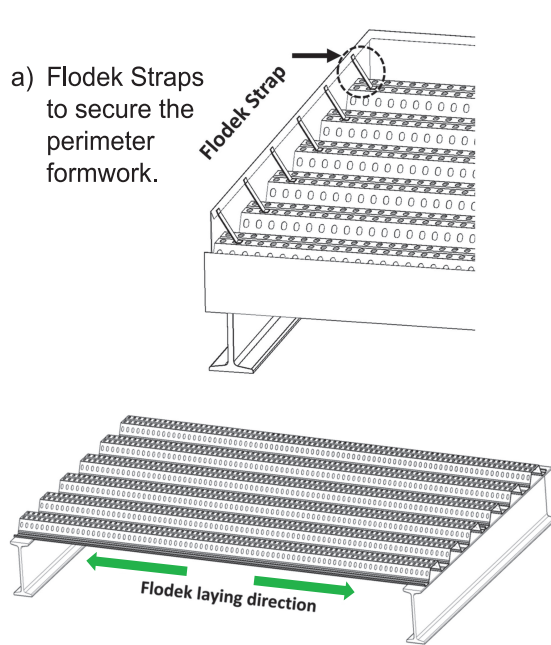
#### Substitution

- 2" (length) x 3" (height) x 2" (width) L Angle as a replacement of stud

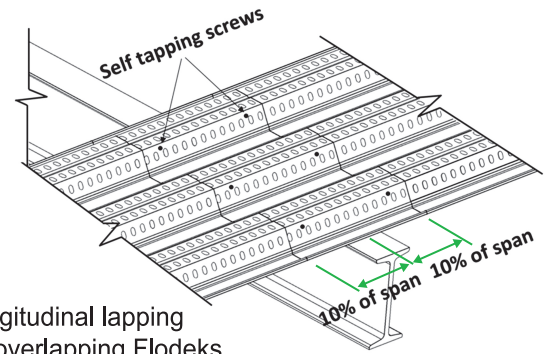




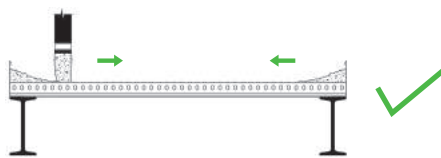
## 5. Installation Guidelines



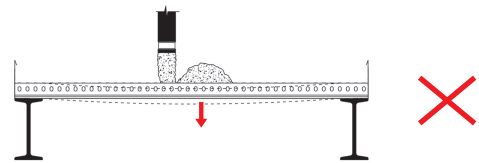
- (b) Male and Female Ribs to prevent leakage during concrete casting.
- (c) Side Lapping to be secured by multiple 16mm self-tapping screws / spot weld on every 2' along the lapping.



- d) Flodek ribs are laid perpendicular to the beam supports



- e) Longitudinal lapping for overlapping Flodeks



- f) Concrete pouring from beam supports to avoid excessive deflection in the middle of beam.

## 6. Propping Guideline Table

Slab Thickness	Single Span Flodek			
	Max Span <u>without</u> prop (m)		Max Span <u>with</u> 1 prop (m)	
	0.75mm thick	1.00mm thick	0.75mm thick	1.00mm thick
120	3350	3750	3750	4500
125	3000	3750	3750	4500
150	3000	3350	3350	4250
170	2750	3000	3000	4000
175	2750	3000	3000	4000
190	2750	3000	3000	3800
200	2500	3000	3000	3800

Note:

- The propping guideline table is produced based on  $26 \text{ kN/m}^3$  unit weight which is the sum of  $24 \text{ kN/m}^3$  (normal concrete),  $1 \text{ kN/m}^3$  (wet concrete condition) and  $1 \text{ kN/m}^3$  (normal percentage reinforcement).
- Construction load of  $1.5 \text{ kN/m}^2$  is included in the strength limit state checks according to EN1991-1-1(2002).
- The bending strength of Flodek is checked in accordance to AISI S-100 under the construction load.
- The span values of Flodek required for propping are produced with condition of the deflection exceeds the criteria of  $\frac{S_p}{180\alpha_n}$ .
- When applying props, builders are recommended to use soft material as bearer to prevent surface damage/indentation on the bottom side of Flodek.

## 7. Delivery & Transportation

- Recommended length for delivery is 8.2 - 32 ft. However, cut-to-length is available upon request, subjected to the handling method.



## 8. Section Properties

Properties	Section	RF75075	RF75100	*RF75120
Thickness TCT (mm)		0.75	1.00	1.20
Mass in (kg/m)		7.20	9.60	11.50
Sectional area (mm <sup>2</sup> )		921.40	1,228.70	1,474.50
Moment of inertia, $I_{xx} \times 10^6$ (mm <sup>4</sup> )		0.898	1.198	1.438
Moment of inertia, $I_{yy} \times 10^6$ (mm <sup>4</sup> )		68.145	90.900	109.000
Radius of gyration, $r_x$ (mm)		31.23	31.23	31.23
Radius of gyration, $r_y$ (mm)		272.00	272.00	272.00
Centroid x (mm)		461.89	461.89	461.90
Centroid y (mm)		36.80	36.80	36.80
Section modulus, $Z_x$ (mm <sup>3</sup> )		24,178	32,132	38,455
Section modulus, $Z_y$ (mm <sup>3</sup> )		147,490	196,631	235,924
<b>Shear Properties</b>				
$A_x$ (mm <sup>2</sup> )		222.29	296.51	355.61
$A_y$ (mm <sup>2</sup> )		458.60	611.58	733.60
$Q_x$ (mm <sup>3</sup> )		13,383	17,846	21,415
$Q_y$ (mm <sup>3</sup> )		108,844	145,145	174,177
<b>Torsion</b>				
Polar moment of inertia, $J$ (mm <sup>4</sup> )		172.667	409.399	707.104
Radial distance of point from center of section, $r$ (mm)		0.762	1.057	1.367
Warping constant, $I_w$ (mm <sup>6</sup> ) $\times 10^8$		780.90	1,041.40	1,249.69

\*Rofo-Flodek I with 1.2mm thickness only available upon request.

Refer to Detailed Brochure for more information OR contact our Technical Engineers for enquiries.

## 9. Projects Reference

(a) Lot 31 Head Office



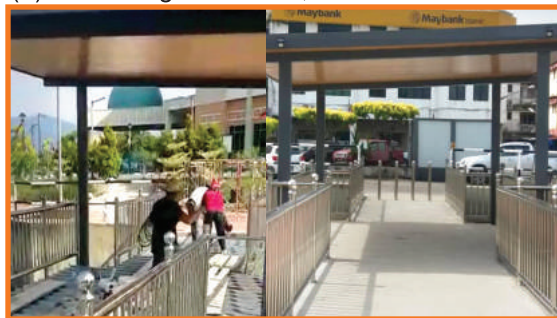
(b) Swallow's Nest Building



(c) Club House



(d) Foot Bridge in Lawas, Sarawak



(e) Artiserrie in Kolombong



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