

SMARTDEK® Test, Feature & Benefit

- Saving concrete up to 25% reduce slab self weight 60 kg/m²
- Fast construction speed
- Clearer project site
- Flexible opening adjustment
- Less transportation cost
- 3 pans with 51 mm rib height of W-Deck profile
- Pan and Rib Stiffener

INTERNATIONAL TEST

Formwork Test, Composite Test & Fire Test



Formwork - Point Load



Formwork - Air Pressure Test



Composite - Slip Block Test



Composite -
5000 Cyclic Load test



Fire Test - BRANZ



Fire Test - Victoria University

LOCAL TEST at ITB

Formwork Test, Composite Test,
Fire Test and Vibration Test



Vibration Test



Fire Test



PROJECT REFERENCES

MALL
01. Central Park Mall - Jakarta
02. Blok M Square - Jakarta
03. Summarecon Mall Serpong - Tangerang

OFFICES
04. Pacific Place Office Tower - Jakarta
05. Arcadia Office Tower - Jakarta

INDUSTRIAL
06. Jakarta Refinery of Smart TBK - Marunda Center, Jakarta
07. Pharos Kalbefarma Factory - Tangerang

FACILITIES
08. OMNI International Hospital - Serpong Tangerang
09. Airlangga University - Surabaya, Jawa Timur

LYSAGHT

"One and Only"



SMARTDEK

Best Metal Floor Deck Design

WHY SMARTDEK® PROFILE ?

1. Research & Development Support

BlueScope Lysaght places great emphasis on product research and testing. All of our LYSAGHT structural products are subjected to rigorous test such as slip block test, formwork test including shear and bearing, full scale slab test, composite slab cyclic test, fire rating test, formwork – air pressure test, formwork – four point load test and concentrated load test. These are carried out in the labs of the lysaght Technology Center in Chester Hill, Sydney, Australia, to ensure maximum performance and quality of our decking profiles.

2. Product Recommendation & Design to Suit your Specifications

Working from your project specifications, our engineers will follow up on your requirements and work out a set of calculations and project proposal. A user friendly Excel-based software for the design of composite slabs with LYSAGHT SMARTDEK profile will be available to assist a competent engineer in deriving an optimal solution. This software should be used in conjunction with the SMARTDEK Design and Construction Guide.

3. Quality Assurance – Material & Manufacturing Process

The LYSAGHT brand name is synonymous with quality and performance. As with all other LYSAGHT products, SMARTDEK profiled steel sheets comply with major design standards adopted across Asia.

4. World Wide Project Experience

Proven track of successful world wide project from previous profile (POWERDEK, BONDEK, 2W-DEK, 3W-DEK) on medium to high rise buildings give us strong knowledge for implementary SMARTDEK, on every construction.

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LYSAGHT® SMARTDEK® Best Metal Floor Deck Design



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DESIGN
FLEXIBILITY



DURABILITY
SECURITY



HI-TECH
PRODUCTION



RECYCLING

An Enhanced Look of SMARTDEK®

Properties and Quality

Installation & Properties



INTRODUCTION TO SMARTDEK®

SMARTDEK® is a new innovative steel decking profiled that brings greater economy and design freedom to building with composite concrete slabs. It is a unique and proudly to say that our design engineers scoured around the globe to find the best “W” – profiles in the world. After several advanced examinations, our engineers incorporated the best aspects of each profile into new SMARTDEK®. The profile has been specifically developed for Australian high tensile steels – which makes SMARTDEK® one of the best performing “W” profiles in the world. This profile is designed to meet your requirement availability for diverse building needs.



This resulted in a new innovative and optimized shape for SMARTDEK®, having flange stiffeners and deep embossments, which act as web stiffeners, to increase the load carrying capacity. Due to the large depth of the profile, an increase of the flexural rigidity reduces deflections.

SMARTDEK® steel sheets are permanent formwork for a suspended composite concrete slab. In its assembled state, it can be used as a working platform and formwork to support wet concrete, construction materials and trades.

When the concrete hardens, SMARTDEK® acts as the bottom reinforcement of the concrete slab. SMARTDEK® is a complete structural steel decking system for concrete, masonry or steel frame construction.

MATERIAL SPECIFICATION

SMARTDEK® profiled steel sheeting is roll-formed from hot dipped, zinc coated, chromate-passivated, and high strength grade steel strip.

Thickness		Coating Mass (total of both sides)	Yield Strength	International Standard Equivalent
BMT	TCT			
0.70 mm	0.75 mm	SUPERDYMA 180 g/m2	550 Mpa	SuperDyma coating
0.70 mm	0.75 mm	ZINCOATED 275 g/m2	550 Mpa	AS1397-2001 JIS G3302&G3321
1.00 mm	1.05 mm		550 Mpa	ASTM A568/569
1.20 mm	1.25 mm		450 Mpa	BS EN 10142&10147&10215:2000

SECTION PROPERTIES TABLE

	Unit	Symbol	Base Metal Thickness - BMT (mm)		
			0.70	1.0	1.20
Area	mm ² /m	A	889.69	1269.7	1523.96
Inertia Moment	mm ⁴ /m	Ix ¹	409375.50	584791.00	701979.17
Section Modulus	mm ³ /m	Zx ¹	16974	24357.17	29330.33
Mass	Kg/m ²		7.38	10.34	12.33

Note: ALL FIGURE ARE GROSS SECTION PROPERTIES

SMARTDEK® FEATURES & BENEFITS

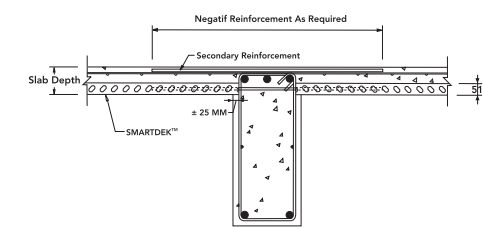
Feature	Benefit	
	Technical	Commercial
G550	Increase free span	Less support
	Stiffer profile no indentation after support removed	Saving cost for formwork
3 mm Embossment	Better composite action	Optimize reinforcement design
	Able to receive high intensity of loading without additional bottom reinforcement	Optimize overall design
960 mm Effective Width	Fit with most column grid, no waste	Saving cost for material waste
		Less on site cutting needed, improve safety
MEGAFLOOR® Software	Powerful tool to design decking as formwork and composite	Less time and resources to design composite slab



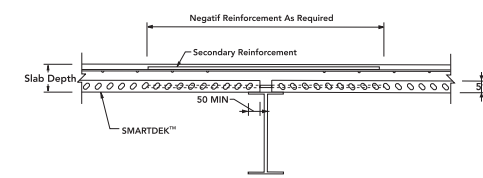
SMARTDEK® SPAN TABLE (FORMWORK STAGE)

Span Type	Single			Continuous End			Continuous Interior		
	0.7	1.0	1.2	0.7	1.0	1.2	0.7	1.0	1.2
100	2380	2740	2800	2640	3410	3200	2640	3280	3200
110	2310	2650	2780	2550	3320	3110	2550	3170	3110
120	2230	2570	2700	2470	3230	3020	2470	3070	3020
130	2170	2500	2620	2400	3150	2930	2400	2990	2930
140	2110	2430	2560	2330	3080	2850	2330	2900	2850
150	2060	2370	2500	2270	3000	2770	2270	2800	2770
160	2010	2330	2440	2210	2930	2700	2210	2710	2700
170	1960	2260	2390	2160	2850	2640	2140	2630	2640
180	1920	2230	2340	2110	2790	2580	2080	2550	2580
200	1840	2150	2180	2030	2670	2470	1870	2300	2470

Installation on Concrete Frame Construction



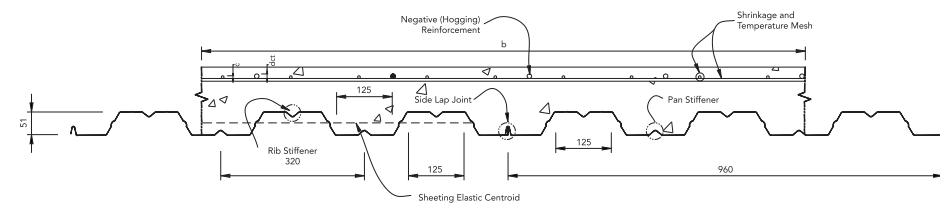
Installation on Steel Frame Construction



SMARTDEK® PROFILE & DIMENSION

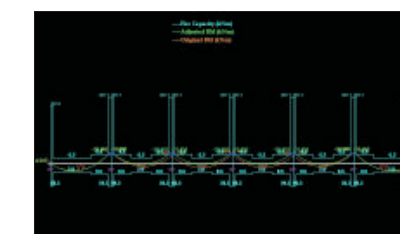
The nominal dimensions of SMARTDEK® profiled steel sheeting are shown in the figure beside.

The effective cover width is 960mm. In the assembled state, the profile comprises two intermediate male and female ribs for every interlocking side-lap joint.



TYPICAL SMARTDEK® COMPOSITE SECTION

MEGAFLOOR™ SOFTWARE



SMARTDEK® is supported by excellence and PC based design software.

MEGAFLOOR™ SOFTWARE is an ultimate tool to design decking as formwork and composite for optimum result using empirical equation.

Becomes Ultimate Tool to Design Decking as Formwork, Composite and Fire.

Fast in Designing Composite Slab. Less Resource for planning the usage of SMARTDEK®.

SMARTDEK® INSTALLATION PROCESS

