



LYSAGHT® SMARTDEK™

User's Guide for
Construction and
Installation of SMARTDEK™



SMARTDEK™
Structural Decking System

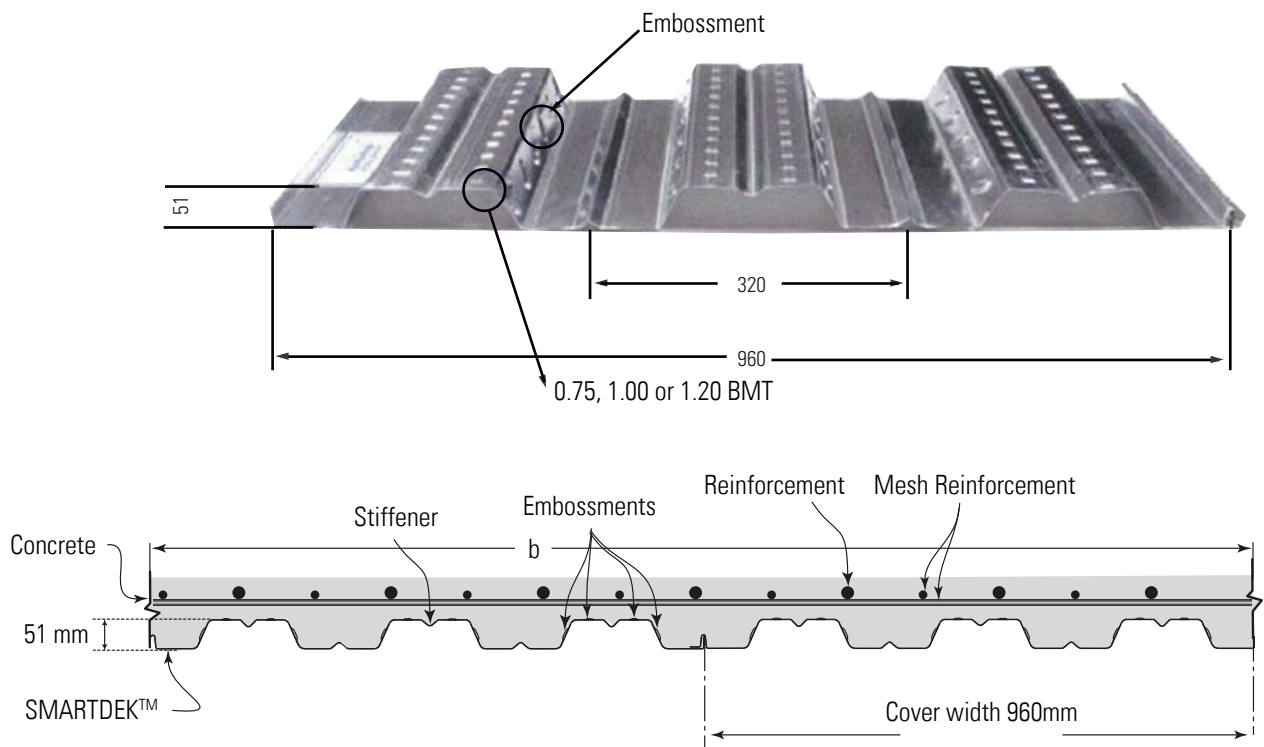
- 960mm Effective Width - Our widest steel deck
- Acts as permanent formwork with minimal propping and no stripping of formwork
- Works as composite slab with reduced self-weight due to concrete displacement

INTRODUCING SMARTDEK™

LYSAGHT® SMARTDEK™ Structural deck system is an innovative “W” proiled steel decking made from high strength zinc-coated steel. It brings greater economy as it provides widest cover per weight of steel and reduces the amount of concrete volume as in a solid slab.

LYSAGHT® SMARTDEK™ acts as a permanent formwork for a composite concrete slab, which in its assembled state can be used as a working platform as well as a formwork to support wet concrete, construction materials and trades. When the concrete hardens, it acts as the bottom tensile reinforcement provided composite slab design is taken into consideration.

SMARTDEK™ PROFILE & DIMENSIONS



Material Section Properties

SMARTDEK™ Thickness (BMT) (mm)	Self Weight (kg/m ²)	Full Cross-Sectional Area (mm ² /m)	Zinc Coating (g/m ²)*	Steel Grade (MPa)**	Inertia Moment I _x ³ (mm ⁴ /m)	Section Modulus Z _x ¹ (mm ³ /m)
0.75	7.84	953.0	275	550	438645.00	16217.18
1.00	10.34	1269.7	275	550	526562.50	19479.17
1.20	12.33	1523.9	275	550	701979.17	25958.33

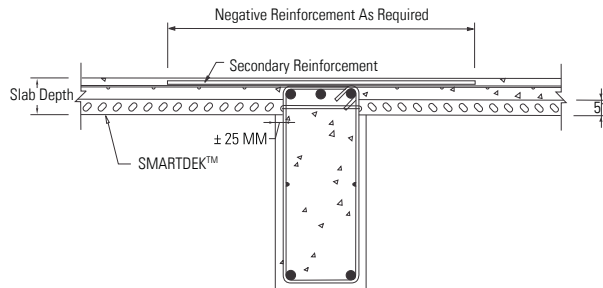
NOTE:

* Nominal coating thickness

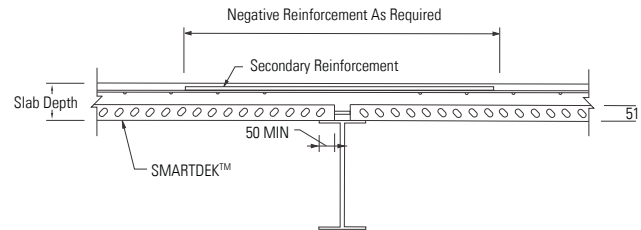
** Minimum yield strength of steel

SMARTDEK™ INSTALLATION GUIDE

Installation on Concrete Frame Construction



Installation on Steel Frame Construction



SEQUENCE OF CONSTRUCTION



1 Place SMARTDEK™ sheet bundle on support



2 Place temporary support if required



3 Lay SMARTDEK™ sheets



4 Clinch male and female lip



5 Fix steel edge form wherever required



6 Fix SMARTDEK™ profiles to steel or concrete beam

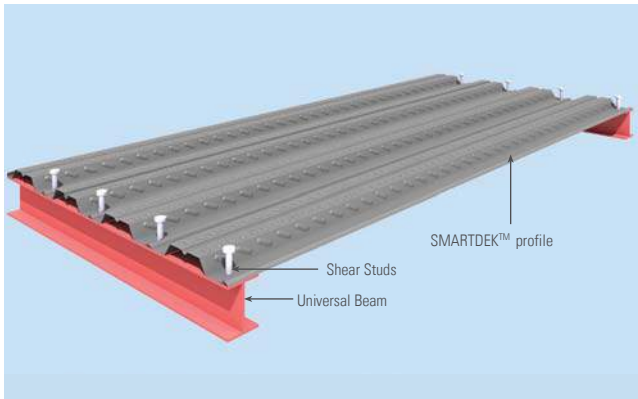


7 Place reinforcement

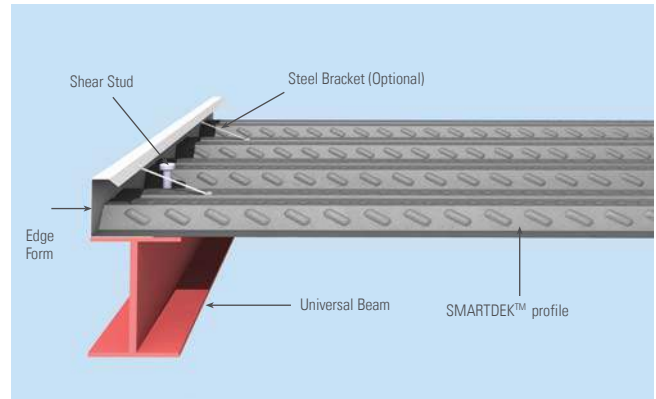


8 Place concrete

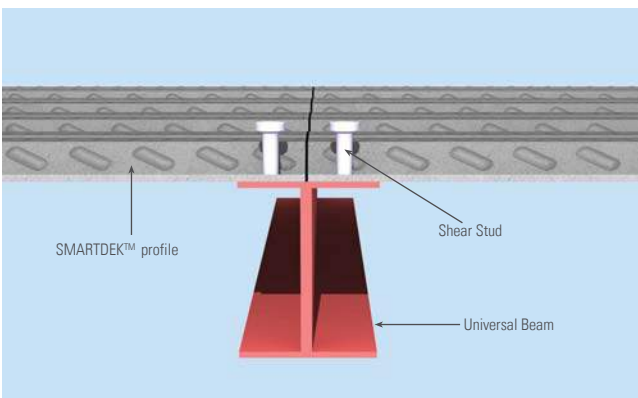
TYPICAL CONNECTION DETAILS



SMARTDEK™ Fixing details: The accessories are added as per design requirement.



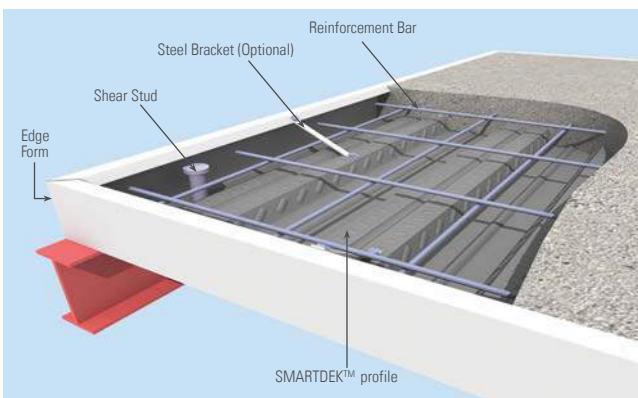
End details-Flush Type: Standard end closure detail adopted for steel frame structure.



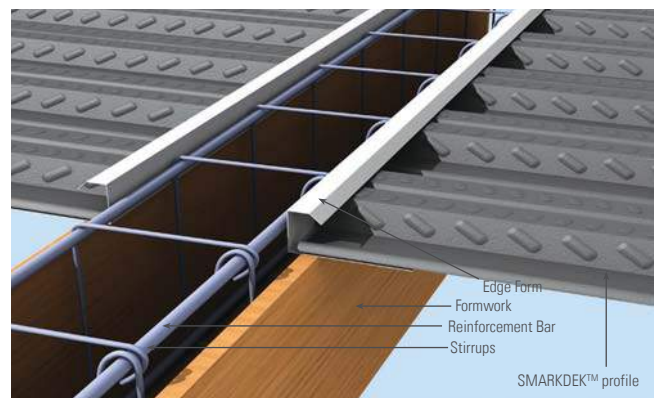
Butt joint details: Standard joint detail for continuous casting of slab.



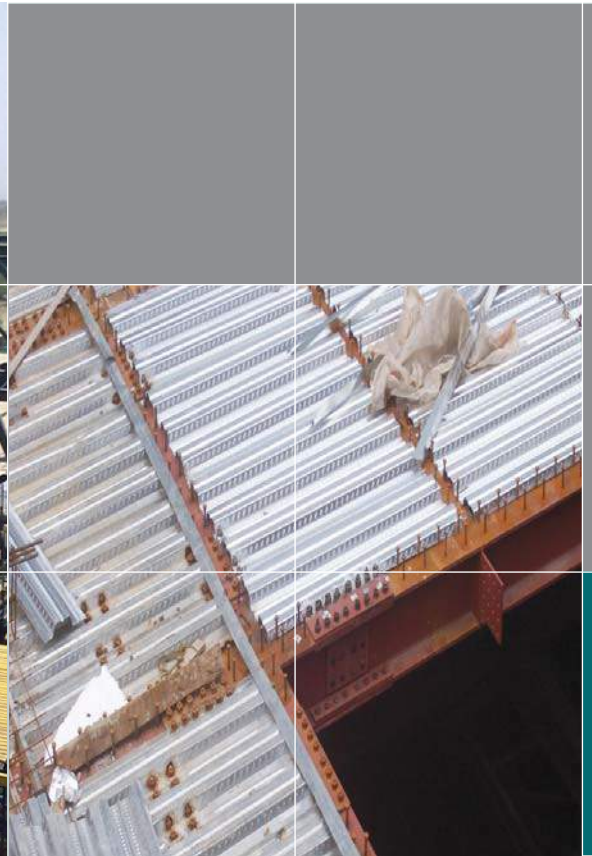
Temporary support details (If required): SMARTDEK™ profile spans longer than conventional system where possibility of temporary support is less.



Corner details: The ends are closed to make sure the concrete slurry takes the required shape quickly.



Concrete fixing details: The casting of beam & slab is done simultaneously. This saves time and brings economy.



TRUSTED PARTNER FOR BUILDING SYSTEMS

NS BLUESCOPE LYSAGHT SINGAPORE PTE LTD

18 BENOI SECTOR, JURONG TOWN, SINGAPORE 629851

TEL: 65-6264 1577 FAX: 65-6265 0951

www.lysaght.com.sg

SGSUPPORT@bluescopesteel.com.

For more information, please contact:

+65 6264 1577



Copyright © 2014 by BlueScope Steel Limited. All rights reserved. No part of this brochure shall be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, recording or otherwise, without written permission from BlueScope Steel Limited. LYSAGHT®, KLIP-LOK®, SPANDEK®, TRIMDEK®, SELECT SEAM®, LOCKED SEAM®, ZIPDEK®, PRESTIGE®, BONDEK®, POWERDEK®, SMARTDEK™, PROBUILD®, ZINCALUME® and COLORBOND® are registered trademark and ULTRALITETM is a trademark of BlueScope Steel Limited ABN 16 000 011058. BlueScope Steel Limited

* Warranty terms and conditions apply.

