

RKALC



**AUSTRALIAN – DEVELOPED
STRUCTURAL ENGINEERING SOFTWARE**



CLOUD BASED

Access your projects
anywhere, anytime



TRANSPARENT

Every step shown, no
black boxes



VERIFIED

Built for confidence
in design & review



EXPANDING

New tools and features
added regularly

RKALC



STEEL, TIMBER, & MASONRY DESIGN

**Alongside concrete, RKALC
covers all primary structural
materials for Australian industry**



**SCAN TO EXPLORE
RAKLC FREE**



RK Software Solutions

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**Cloud
based**



**Transparent
Calcs**



Verified

- **Masonry Wall Design**
- **Timber Section Design**
- **Continuous Timber**

Beam analysis and design

- Full Australian Library for open and hollow section
- Design of steel sections
- Composite Steel Design

Section Family	[UB]		Class	Compact	Ze (mm)	897000	as per table 4, dM _{Ed} enhancement of 181 % is required by the composite action	
Section	S260UB505 Y						Steel H y d (N) - Clause 3.5.4.2	1747
Span Le (mm)	9000						Concrete N c (N) - Clause 3.5.4.2	5304
Super Imposed Dead Load KPa	1.5						Depth of Slab (mm) (mm from top)	40
Super Imposed Live Load KPa	1.5						Height Above Slab (mm)	60
STRA, Construction Loading KPa	2						Steel Shape Capacity (N)	60.44
Reinforced L2 Construction (mm)	3000						Max Possible Steel Spacing (mm)	480
Steel Section Pre-camber (mm)	10						Min Possible Steel Spacing (mm)	95

Composite Inputs			
Fc (MPa)	25	Stud Dia	19
Stud Pitch	120	Stud Height	100
Eff. Width	5000	Stud Type	Headed
Beam Tab Width	4000	Stud fy	410
		Double Studs?	No



Key Values

os	0.721	0Mx (N.m)	242
ns	0.962	0Mbx (N.m)	175
Moa	415	0Vweb (N)	449
MuRa	72 %		



Minimum Composite Results

Full Comp. Moment Capacity (N.m)	406	p = 43 %
Full Composite dM _{Ed} Enhancement	278 %	
Full Composite dM _{Ed} Enhancement	201 %	
Required Studs for 100% Comp.	52	
note: 52 studs centrally at spacing of 170 mm		



Minimum Composite Results

Min Comp. Moment Capacity	157	p = 43 %
Full Composite dM _{Ed} Enhancement	158 %	
Min Comp. dM _{Ed} Enhancement	144 %	
Required Studs for Min Comp.	23	
total 23 studs centrally at spacing of 375 mm		

Composite Sec Inertia (I _{mm⁴})	
Deflection (Composite) (mm)	37522+6
Deflection Ratio (Composite)	17.38
Vibration Frequency (Composite)	5.49 Hz
Deflection (Beam Only) (mm)	63.72

