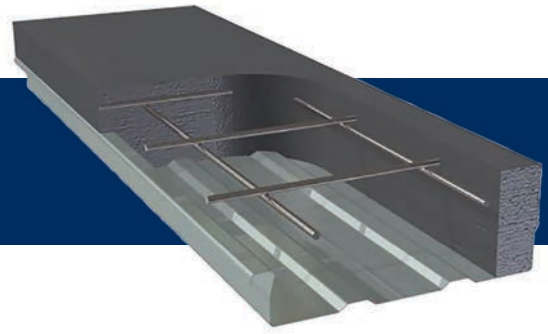




KingFlor[®] KF57[®]



KingFlor® KF57®



Fielders KF57® is a steel formwork solution suitable for composite concrete slabs in concrete and steel framed construction. KF57® is a light, easy to use, steel decking designed to combine with a concrete slab to produce a composite concrete slab system. KF57® incorporates an improved deck profile with deeper pan stiffeners.



Features and Benefits

Feature	Benefit
Permanent composite formwork system	Once laid, KF57® becomes a permanent part of the slab, eliminating formwork stripping
Unique profile	Wide pans allow for clear access for in-floor services
Minimal propping	Less propping congestion and easy access to the underside of the slab
Supplied pre-cut to length, with 300mm wide cover	Quick to install
Reinforcing mesh can be laid directly on to the ribs	In many applications there is no need for mesh support stools
Closed rib profile, fully embedded in concrete slab	Major reduction in fire reinforcement

KF57® Material Specifications

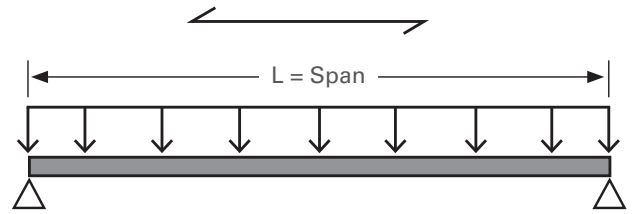
KF57 is manufactured from G550 (550 MPa Yield Stress) steel with a Base Metal Thickness (BMT) of 0.75mm and 1.00mm. The galvanised coating thickness is a Z350 (350 g/m²) in accordance with AS 1397:2001.

Material Properties	0.75 BMT	1.00 BMT
Mass Area – Average mass of fitted deck per plan area (kg/m ²)	9.97	13.10
Mass Linear – Mass of individual length (kg/m)	2.99	3.93
Zinc Coating (g/m ²) (Z350)	350	350
Yield Strength (MPa)	550	550

Note: KF57® is also available with Fielders patented Re-Lok corner embossments for superior composite slab performance. Please check with your local Fielders representative for details.

KF57® Formwork/Slab Span Tables

Single Span



Single Slab Span (L) on Steel support

Formwork deflection limits L/130 and L/240

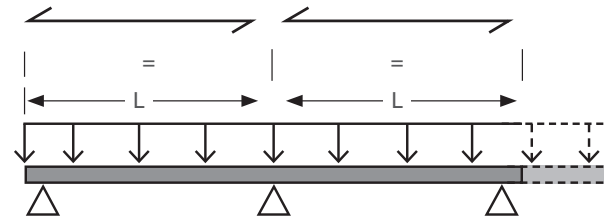
Slab Depth (mm)	L/130				L/130				L/240				L/240			
	0.75 BMT Number of props per span				1.0 BMT Number of props per span				0.75 BMT Number of props per span				1.0 BMT Number of props per span			
	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
90	2550	[5950]	[9000]	[12050]	3100	[7800]	[10900]	[14850]	2350	[6000]	[8350]	[11400]	2600	[6600]	[9200]	[12550]
100	2450	[5800]	[8750]	[11700]	3000	[7650]	[10650]	[14450]	2300	[5850]	[8100]	[11050]	2500	[6400]	[8900]	[12150]
110	2400	[5650]	[8550]	[11400]	2900	[7450]	[10350]	[14100]	2200	[5700]	[7900]	[10750]	2450	[6250]	[8650]	[11800]
120	2350	[5500]	[8350]	[11150]	2850	[7250]	[10100]	[13800]	2150	[5550]	[7700]	[10450]	2400	[6100]	[8450]	[11500]
130	2300	[5350]	[8150]	[10900]	2800	[7050]	[9900]	[13500]	2100	[5400]	[7500]	[10200]	2300	[5950]	[8250]	[11250]
140	2250	[5250]	[7950]	[10650]	2750	[6900]	[9700]	[13200]	2050	[5300]	[7350]	[10000]	2250	[5800]	[8050]	[11000]
150	2200	5100	[7750]	[10400]	2700	[6750]	[9550]	[12950]	2000	5150	[7200]	[9800]	2200	[5700]	[7900]	[10800]
160	2150	5000	[7600]	[10150]	2650	[6600]	[9350]	[12750]	2000	5050	[7050]	[9600]	2150	5600	[7750]	[10550]
170	2100	4900	[7450]	[9950]	2600	[6450]	[9200]	[12500]	1950	4950	[6900]	[9400]	2150	5500	[7600]	[10350]
180	2100	4850	[7300]	[9800]	2550	[6350]	[9000]	[12300]	1900	4900	[6800]	[9250]	2100	5400	[7450]	[10150]
190	2050	4750	[7200]	[9650]	2500	6250	[8900]	[12100]	1900	4800	[6700]	[9100]	2050	5300	[7350]	[10000]
200	2000	4650	[7100]	[9450]	2450	6100	[8750]	[11900]	1850	4700	6550	[8950]	2050	5200	[7250]	[9850]
210	2000	4600	6950	[9300]	2450	6000	[8600]	[11750]	1800	4650	6450	[8800]	2000	5150	7100	[9700]
220	1950	4500	6850	[9150]	2400	5900	[8500]	[11600]	1800	4550	6400	[8700]	1950	5050	7000	[9550]
230	1900	4450	6750	[9000]	2350	5800	[8400]	[11400]	1750	4500	6300	[8550]	1950	5000	6900	[9450]
240	1900	4350	6600	[8850]	2350	5700	8300	[11300]	1750	4400	6200	[8450]	1900	4900	6850	[9300]
250	1850	4300	6500	8700	2300	5650	8200	[11150]	1700	4350	6100	8350	1900	4850	6750	[9200]
260	1850	4250	6400	8550	2250	5550	8100	[11000]	1700	4300	6050	8250	1850	4800	6650	9050
280	1800	4150	6200	8300	2200	5400	7900	[10800]	1650	4150	5900	8050	1800	4700	6500	8850
300	1750	4000	6050	8050	2150	5250	7750	10500	1600	4050	5750	7850	1750	4600	6350	8650
320	1700	3900	5900	7850	2100	5100	7600	10200	1600	3950	5650	7700	1750	4500	6250	8500
340	1650	3800	5750	7650	2100	4950	7450	9950	1550	3850	5550	7550	1700	4400	6100	8300
360	3750	5600	7500	7500	2050	4850	7300	9700	1550	3750	5450	7400	1650	4300	6000	8150
380	1600	3650	5500	7350	2000	4750	7100	9500	1500	3650	5350	7300	1650	4250	5900	8000
400	1550	3600	5400	7200	2000	4650	6950	9300	1500	3600	5250	7200	1650	4150	5800	7900

Notes:

- Concrete density: 24kN/m³.
- KF57® strength and serviceability capacities are based on full scale test results.
- An additional concrete weight due to ponding of (0.7x deflection limit) 24.0kN/m³ has been considered for Strength and serviceability limit states.
- The spans in the above table include a minimum bearing width of 50mm on each end support.
- Supports shall be effectively rigid and strong to support construction loads.
- The information contained in this publication is intended for guidance only. This information should only be use by a qualified structural engineer.
- The practical limit for span to slab depth ratio is considered to be 35 for single spans, 40 for continuous spans. Values above these limits are listed in [] brackets.
- The spans in the tables are based on the condition that KF57® sheets are fully restrained in the direction perpendicular to the sheet span.
- Tables are based on the following maximum construction loads:
 - Workmen and equipment: 1kN/m²
 - Mounting of concrete: 2kN/m² over an area of 1.6m x 1.6m and zero on the rest of the area
 - Stacking of material on KF57® before placement of concrete: 1kN/m²
 - The table does not consider axial loads on the product
 - Allowance for weight of reinforcement as well as the effect of ponding is included

KF57® Formwork/Slab Span Tables

Continuous Span



Continuous: 3 spans (L) on steel support
Formwork deflection limits L/130 and L/240

Slab Depth (mm)	L/130				L/130				L/240				L/240			
	0.75 BMT Number of props per span				1.0 BMT Number of props per span				0.75 BMT Number of props per span				1.0 BMT Number of props per span			
	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
90	3000	[6000]	[9000]	[12050]	3600	[7400]	[11100]	[14800]	2750	[5650]	[8500]	[11350]	3050	[6250]	[9350]	[12450]
100	2900	[5850]	[8750]	[11700]	3550	[7200]	[10800]	[14400]	2700	[5500]	[8250]	[11000]	2950	[6050]	[9050]	[12100]
110	2850	[5700]	[8550]	[11400]	3450	[7000]	[10550]	[14050]	2600	[5350]	[8050]	[10700]	2850	[5850]	[8800]	[11750]
120	2750	[5550]	[8350]	[11150]	3350	[6850]	[10300]	[13700]	2550	[5200]	[7800]	[10400]	2800	[5700]	[8600]	[11450]
130	2700	[5450]	[8150]	[10900]	3300	[6700]	[10050]	[13400]	2500	5100	[7600]	[10150]	2750	[5600]	[8400]	[11200]
140	2650	5300	[8000]	[10650]	3200	[6550]	[9850]	[13150]	2450	4950	[7450]	[9950]	2650	5450	[8200]	[10950]
150	2550	5200	[7750]	[10400]	3150	[6450]	[9700]	[12900]	2350	4850	[7300]	[9750]	2600	5350	[8050]	[10750]
160	2500	5050	[7600]	[10150]	3100	6350	[9500]	[12700]	2350	4750	[7150]	[9550]	2550	5250	[7850]	[10500]
170	2450	4950	[7450]	[9950]	3050	6200	[9350]	[12450]	2300	4650	[7000]	[9350]	2500	5150	[7700]	[10300]
180	2450	4900	[7350]	[9800]	3000	6100	[9200]	[12250]	2250	4600	6900	[9200]	2450	5050	[7600]	[10150]
190	2400	4800	7200	[9650]	2950	6000	[9050]	[12050]	2200	4500	6800	[9050]	2450	4950	7450	[9950]
200	2350	4700	7100	[9450]	2900	5900	[8900]	[11850]	2200	4450	6700	[8900]	2400	4900	7350	[9800]
210	2300	4650	6950	[9300]	2850	5850	[8750]	[11700]	2150	4400	6550	[8750]	2350	4800	7250	[9650]
220	2250	4550	6850	[9150]	2800	5750	8650	[11550]	2100	4300	6500	8650	2300	4750	7150	[9500]
230	2250	4500	6750	9000	2800	5700	8550	[11400]	2050	4250	6400	8500	2300	4700	7050	[9400]
240	2200	4400	6600	8850	2750	5600	8450	[11250]	2050	4200	6300	8400	2250	4600	6950	9250
250	2150	4350	6500	8700	2700	5550	8300	[11100]	2000	4150	6200	8300	2250	4550	6850	9150
260	2100	4250	6400	8550	2700	5500	8250	[11000]	2000	4100	6150	8200	2200	4500	6750	9050
280	2050	4150	6200	8300	2600	5350	8050	10750	1950	4000	6000	8000	2150	4400	6600	8800
300	2000	4000	6050	8050	2550	5250	7850	10500	1900	3900	5850	7800	2100	4300	6450	8650
320	1950	3900	5900	7850	2500	5100	7650	10200	1850	3800	5750	7650	2050	4200	6350	8450
340	1900	3800	5750	7650	2450	4950	7450	9950	1850	3750	5600	7500	2000	4150	6200	8300
360	3750	5600	7500	7500	2400	4850	7300	9700	1800	3650	5500	7350	2000	4050	6100	8150
380	1800	3650	5500	7350	2350	4750	7100	9500	1750	3600	5450	7250	1950	4000	6000	8000
400	1800	3600	5400	7200	2300	4650	6950	9300	1750	3550	5350	7150	1900	3900	5900	7850

Notes:

- Concrete density: 24kN/m³.
- KF57® strength and serviceability capacities are based on full scale test results.
- An additional concrete weight due to ponding of (0.7x deflection limit) 24.0kN/m³ has been considered for Strength and serviceability limit states.
- The spans in the above table include a minimum bearing width of 50mm on each end support.
- Supports shall be effectively rigid and strong to support construction loads.
- The information contained in this publication is intended for guidance only. This information should only be use by a qualified structural engineer.
- The practical limit for span to slab depth ratio is considered to be 35 for single spans, 40 for continuous spans. Values above these limits are listed in [] brackets.
- The spans in the tables are based on the condition that KF57® sheets are fully restrained in the direction perpendicular to the sheet span.
- Tables are based on the following maximum construction loads:
 - Workmen and equipment: 1kN/m²
 - Mounting of concrete: 2kN/m² over an area of 1.6m x 1.6m and zero on the rest of the area
 - Stacking of material on KF57® before placement of concrete: 1kN/m²
 - The table does not consider axial loads on the product
 - Allowance for weight of reinforcement as well as the effect of ponding is included

KF57® Temporary Propping Tables

KF57® Frame Propping - 1200mm Frame Size

Maximum Spans (mm) for Deflection L/240

Dcs (mm)	1 Frame		2 Frame	
	0.75 BMT	1.00 BMT	0.75 BMT	1.00 BMT
100	[5,300]	[5,700]	[8,550]	[9,150]
110	[5,200]	[5,600]	[8,400]	[9,000]
120	[5,100]	[5,500]	[8,250]	[8,850]
130	[5,000]	[5,400]	[8,100]	[8,700]
140	4,900	[5,300]	[7,950]	[8,550]
150	4,800	5,200	[7,800]	[8,400]
160	4,700	5,100	[7,650]	[8,250]
170	4,700	5,000	[7,650]	[8,100]
180	4,600	5,000	[7,500]	[8,100]
190	4,500	4,900	[7,350]	[7,950]
200	4,500	4,800	[7,350]	[7,800]
210	4,400	4,800	7,200	[7,800]
220	4,400	4,700	7,200	7,650
230	4,300	4,700	7,050	7,650
240	4,300	4,600	7,050	7,500
250	4,300	4,600	7,050	7,500

See pages 4 and 5 for Propping Table notes.

KF57® Frame Propping - 1500mm Frame Size

Maximum Spans (mm) for Deflection L/240

Dcs (mm)	1 Frame		2 Frame	
	0.75 BMT	1.00 BMT	0.75 BMT	1.00 BMT
100	[5,600]	[6,000]	[9,150]	[9,750]
110	[5,500]	[5,900]	[9,000]	[9,600]
120	[5,400]	[5,800]	[8,850]	[9,450]
130	[5,300]	[5,700]	[8,700]	[9,300]
140	[5,200]	[5,600]	[8,550]	[9,150]
150	5,100	[5,500]	[8,400]	[9,000]
160	5,000	5,400	[8,250]	[8,850]
170	5,000	5,300	[8,250]	[8,700]
180	4,900	5,300	[8,100]	[8,700]
190	4,800	5,200	[7,950]	[8,550]
200	4,800	5,100	[7,950]	[8,400]
210	4,700	5,100	[7,800]	[8,400]
220	4,700	5,000	[7,800]	[8,250]
230	4,600	5,000	7,650	[8,250]
240	4,600	4,900	7,650	8,100
250	4,600	4,900	7,650	8,100

Installing Fielders KF57®

Temporary Propping

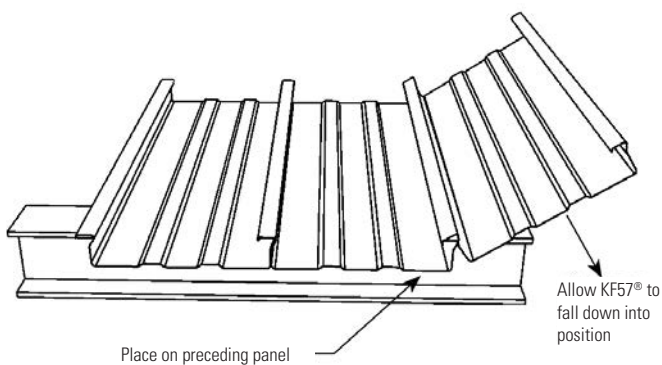
If temporary propping is required (refer to the temporary propping tables), props should be placed at the correct centres prior to laying the KF57® sheets. Generally, timber or steel bearers with a minimum dimension of 75mm x 75mm are used on vertical props. The props should be installed so as to prevent settlement during loading by wet concrete and other construction loads.

Wide ply strips, of 300mm wide, may be positioned above the header bearers to assist in dispersing the load and minimise any local deformation of the decking due to the headers.

Temporary props should only be removed after the slab has reached sufficient strength (at least 75% of the specified 28-day strength). The full design load may only be applied once the slab has achieved 28-day strength.

Laying KF57®

1. Place the KF57® sheet over the supports ensuring a minimum end bearing of 50mm. If supporting on a brick or masonry wall, provide a separating strip such as malthoid.
2. Engage subsequent sheets of KF57® by locking the larger female rib over the male rib as shown in the diagram below.

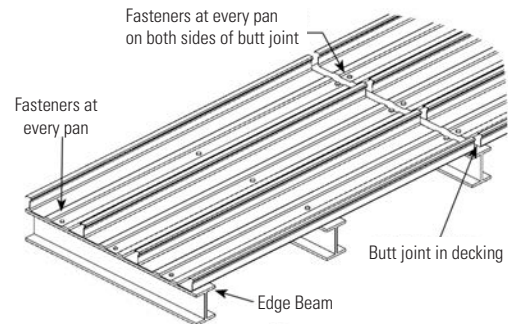


Fasteners and Locations

The decking must be secured to the supporting structure in order to avoid movement and excessive deflection during the pouring of concrete.

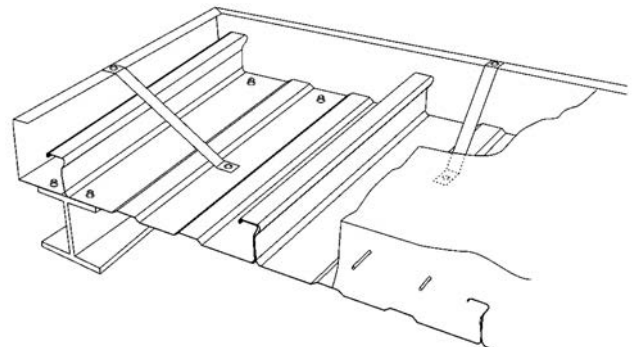
When fixing to a steel support structure, shot fired pins or self-drilling/tapping fasteners should be used. Provide one fastener in each pan at every support.

In the case of other support systems, such as brickwork, block work and concrete, the KF57® sheets must be temporarily held in place against wind and other effects until the concrete is poured.



Edge-form

Galvanised steel edge-forms can be used for the retention of wet concrete to the correct level at the decked floor perimeters. KF57® edge-form is usually shot-fired to the steel support structure or to the KF57® deck and the top of the edge-form is connected back to the decking with restraint straps at approximately 600mm centres using either pop-rivets or self-drilling screws.



Reinforcement

Place all reinforcement in strict accordance with the structural engineer's drawings and specification.

Concrete Placement

The specified grade of concrete and any chemical admixtures must be in strict accordance with AS 3600:2018 and the structural engineer's drawings and specification. The deck must be clear of any excess dirt, grease or debris as this inhibits bonding between the deck and concrete.

Ensure that concrete is applied evenly over the decking surface, as mounding of the wet concrete will cause excessive local loading.

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- b) alter specifications shown in its literature to reflect changes made after the date of such publication.

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