KingFlor® KF70®

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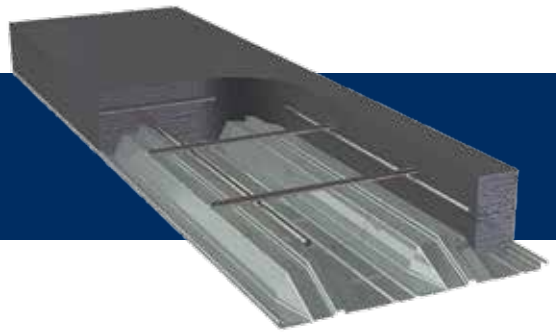
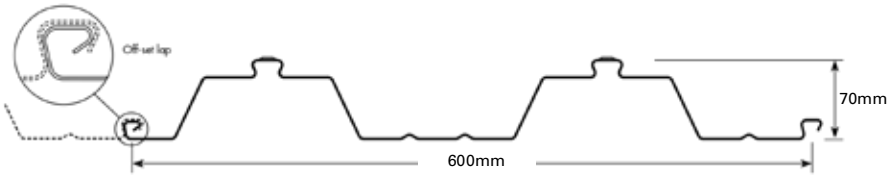


Fielders KF70® is a revolutionary steel formwork solution suitable for composite concrete slabs in concrete and steel-framed construction. KF70® is the answer to increased market demand for a lightweight profile capable of large spans. The KF70® profile displaces 26mm of concrete from the total slab depth to achieve a lightweight slab. This represents a significant saving in concrete costs, supporting framework and foundation loads.



Features and Benefits

Feature	Benefit
SquashCut™ ends	No end caps needed. Also provides rigid and secure platform during construction
Unique off-set lap	Enables shear studs to be placed centrally in the pan in the optimal position
Large unpropped spans	Less propping congestion and easy access to the underside of the slab
Supplied pre-cut to length, with 600mm wide cover	Quick to install
Dovetail rib provides a simple hanger solution	Economic and easy suspension of services from an insert in the dovetail rib
Strong re-entrant features	KF70® gives a strong and reliable shear bond performance making strong composite slabs

Concrete Savings

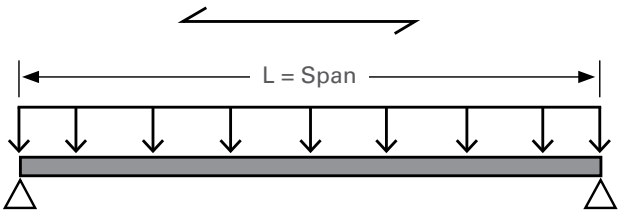
KF70® effectively saves 26mm of concrete off the overall slab depth when compared to conventional concrete slabs of the same depth. This represents a significant saving in concrete costs, supporting framework and foundation loads.

KF70® Material Specifications

KF70® 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/m^2) 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)	8.97	11.78
Mass Linear – Mass of individual length (kg/m)	5.38	7.07
Zinc Coating (g/m^2) (Z350)	350	350
Yield Strength (MPa)	550	550

KF70® Formwork/Slab Span Tables
Single Span



Single span (L) on steel support

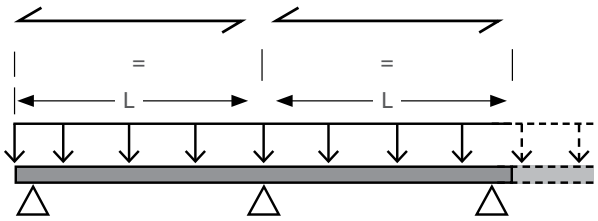
Formwork deflection limits L/130 and L/240

Slab Depth (mm)	L/130 0.75 BMT Number of props per span				L/130 1.0 BMT Number of props per span				L/240 0.75 BMT Number of props per span				L/240 1.0 BMT Number of props per span			
	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
120	2900	[7700]	[10800]	[14650]	3150	[8200]	[11600]	[15750]	2450	[6500]	[9050]	[12350]	2650	[7050]	[9750]	[13300]
130	2850	[7450]	[10500]	[14300]	3050	[8050]	[11300]	[15400]	2350	[6350]	[8800]	[12000]	2550	[6850]	[9500]	[12950]
140	2750	[7250]	[10250]	[13950]	3000	[7900]	[11050]	[15050]	2300	[6150]	[8550]	[11650]	2500	[6650]	[9250]	[12600]
150	2700	[7100]	[10000]	[13650]	2900	[7750]	[10800]	[14700]	2250	[6000]	[8350]	[11350]	2450	[6500]	[9000]	[12300]
160	2650	[6950]	[9800]	[13350]	2850	[7600]	[10600]	[14400]	2200	[5900]	[8150]	[11150]	2350	[6350]	[8800]	[12000]
170	2600	[6750]	[9600]	[13100]	2800	[7450]	[10400]	[14150]	2150	5750	[8000]	[10900]	2300	[6200]	[8650]	[11750]
180	2550	[6600]	[9450]	[12850]	2750	[7350]	[10200]	[13850]	2100	5650	[7800]	[10650]	2250	6100	[8450]	[11500]
190	2500	6500	[9250]	[12600]	2700	[7200]	[10000]	[13600]	2050	5550	[7650]	[10450]	2200	6000	[8300]	[11300]
200	2450	6350	[9100]	[12400]	2650	[7100]	[9850]	[13400]	2050	5450	[7550]	[10250]	2200	5850	[8150]	[11100]
210	2400	6250	[8950]	[12200]	2600	6950	[9700]	[13200]	2000	5350	[7400]	[10100]	2150	5750	[8000]	[10950]
220	2350	6100	[8800]	[12000]	2550	6850	[9550]	[13000]	1950	5250	7300	[9900]	2100	5700	[7900]	[10750]
230	2350	6000	[8700]	[11800]	2500	6750	[9400]	[12800]	1950	5150	7150	[9750]	2100	5600	7750	[10600]
240	2300	5900	[8550]	[11650]	2500	6650	[9250]	[12600]	1900	5100	7050	[9650]	2050	5500	7650	[10400]
250	2250	5800	8450	[11500]	2450	6600	[9150]	[12450]	1850	5000	6950	[9500]	2000	5450	7550	[10250]
260	2250	5700	8350	[11350]	2450	6500	9000	[12300]	1850	4950	6850	[9350]	2000	5350	7450	[10100]
280	2200	5550	8150	[11100]	2350	6350	8800	[12000]	1800	4850	6700	9100	1950	5200	7250	[9850]
300	2150	5400	7950	[10800]	2300	6200	8600	[11700]	1750	4700	6550	8900	1900	5100	7050	9650
320	2100	5250	7750	10550	2250	6050	8400	[11450]	1700	4600	6400	8700	1850	5000	6900	9450
340	2050	5100	7600	10250	2200	5950	8250	11250	1650	4500	6250	8500	1800	4900	6750	9250
360	2000	5000	7450	10000	2150	5850	8100	11050	1650	4400	6150	8350	1750	4800	6650	9050
380	1950	4900	7350	9800	2150	5700	7950	10850	1600	4350	6000	8200	1750	4700	6550	8900
400	1950	4750	7150	9550	2100	5650	7800	10650	1600	4250	5900	8050	1700	4650	6400	8750

Notes:

1. Concrete density: 24kN/m³.
2. KF70® strength and serviceability capacities are based on full scale test results.
3. An additional concrete weight due to ponding of (0.7x deflection limit) 24.0kN/m³ has been considered for Strength and serviceability limit states.
4. The spans in the above table include a minimum bearing width of 50mm on each end support.
5. Supports shall be effectively rigid and strong to support construction loads.
6. The information contained in this publication is intended for guidance only. This information should only be use by a qualified structural engineer.
7. 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.
8. The spans in the tables are based on the condition that KF70® sheets are fully restrained in the direction perpendicular to the sheet span.
9. 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 KF70® 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

KF70® 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 0.75 BMT Number of props per span				L/130 1.0 BMT Number of props per span				L/240 0.75 BMT Number of props per span				L/240 1.0 BMT Number of props per span			
	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
120	3600	[7300]	[10950]	[14600]	3850	[7850]	[11750]	[15700]	3000	[6150]	[9200]	[12300]	3250	[6600]	[9950]	[13250]
130	3500	[7100]	[10650]	[14250]	3750	[7650]	[11500]	[15350]	2900	[5950]	[8950]	[11900]	3150	[6450]	[9650]	[12900]
140	3400	[6950]	[10400]	[13900]	3650	[7500]	[11200]	[15000]	2850	[5800]	[8700]	[11600]	3050	[6250]	[9400]	[12550]
150	3300	[6750]	[10150]	[13550]	3600	[7300]	[11000]	[14650]	2750	5650	[8500]	[11350]	3000	[6100]	[9200]	[12250]
160	3250	[6650]	[9950]	[13300]	3500	[7150]	[10750]	[14350]	2700	5550	[8300]	[11100]	2900	5950	[8950]	[11950]
170	3200	6500	[9750]	[13000]	3450	[7050]	[10550]	[14050]	2650	5400	[8150]	[10850]	2850	5850	[8750]	[11700]
180	3150	6400	[9600]	[12800]	3400	6900	[10350]	[13800]	2600	5300	[7950]	[10600]	2800	5700	[8600]	[11450]
190	3050	6300	[9400]	[12550]	3300	6750	[10150]	[13550]	2550	5200	[7800]	[10400]	2750	5600	[8450]	[11250]
200	3000	6150	[9250]	[12350]	3250	6650	[10000]	[13350]	2500	5100	7650	[10200]	2700	5500	[8300]	[11050]
210	2950	6050	[9100]	[12150]	3200	6550	[9850]	[13100]	2450	5000	7500	[10050]	2650	5450	8150	[10900]
220	2900	5950	[8950]	[11950]	3150	6450	[9700]	[12950]	2400	4950	7400	[9850]	2600	5350	8000	[10700]
230	2900	5900	8800	[11750]	3100	6350	[9550]	[12750]	2350	4850	7300	[9750]	2550	5250	7900	[10500]
240	2850	5800	8700	[11600]	3050	6300	9400	[12550]	2350	4800	7200	9600	2550	5150	7750	[10350]
250	2800	5700	8600	[11450]	3050	6200	9300	[12400]	2300	4700	7100	9450	2500	5100	7650	[10200]
260	2750	5650	8500	[11300]	3000	6100	9150	[12250]	2250	4650	7000	9300	2450	5050	7550	10100
280	2700	5500	8250	11050	2900	5950	8950	[11900]	2200	4550	6800	9100	2400	4900	7350	9800
300	2650	5400	8100	10800	2850	5800	8750	11650	2150	4400	6650	8850	2350	4800	7200	9600
320	2550	5250	7900	10550	2800	5700	8550	11400	2100	4300	6500	8650	2300	4700	7050	9400
340	2500	5100	7700	10250	2750	5600	8400	11200	2050	4250	6350	8500	2250	4600	6900	9200
360	2450	5000	7500	10000	2700	5500	8250	11000	2000	4150	6250	8300	2200	4500	6750	9000
380	2400	4900	7350	9800	2650	5400	8100	10800	2000	4050	6100	8150	2150	4400	6650	8850
400	2350	4750	7150	9550	2600	5300	7950	10600	1950	4000	6000	8000	2100	4350	6500	8700

Notes:

1. Concrete density: 24kN/m³.
2. KF70® strength and serviceability capacities are based on full scale test results.
3. An additional concrete weight due to ponding of (0.7x deflection limit) 24.0kN/m³ has been considered for Strength and serviceability limit states.
4. The spans in the above table include a minimum bearing width of 50mm on each end support.
5. Supports shall be effectively rigid and strong to support construction loads.
6. The information contained in this publication is intended for guidance only. This information should only be use by a qualified structural engineer.
7. 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.
8. The spans in the tables are based on the condition that KF70® sheets are fully restrained in the direction perpendicular to the sheet span.
9. 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 KF70® 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

KF70® Temporary Propping Tables

KF70® 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
120	[6,500]	[6,900]	[10,350]	[11,100]
130	[6,400]	[6,800]	[10,200]	[10,800]
140	[6,200]	[6,700]	[10,050]	[10,650]
150	[6,100]	[6,500]	[9,900]	[10,500]
160	[6,000]	[6,400]	[9,750]	[10,350]
170	5,900	[6,300]	[9,600]	[10,200]
180	5,900	6,200	[9,450]	[10,050]
190	5,800	6,200	[9,300]	[9,900]
200	5,700	6,100	[9,150]	[9,750]
210	5,600	6,000	[9,150]	[9,600]
220	5,600	5,900	[9,000]	[9,600]
230	5,500	5,900	[8,850]	[9,450]
240	5,400	5,800	[8,850]	[9,300]
250	5,400	5,700	8,700	[9,300]

See pages 4 and 5 for Propping Table notes.

KF70® 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
120	[6,800]	[7,200]	[10,950]	[11,550]
130	[6,600]	[7,100]	[10,800]	[11,400]
140	[6,500]	[6,900]	[10,650]	[11,250]
150	[6,400]	[6,800]	[10,500]	[11,100]
160	[6,300]	[6,700]	[10,350]	[10,950]
170	[6,200]	[6,600]	[10,200]	[10,800]
180	6,200	[6,500]	[10,050]	[10,650]
190	6,100	6,400	[9,900]	[10,500]
200	6,000	6,400	[9,750]	[10,350]
210	5,900	6,300	[9,750]	[10,200]
220	5,900	6,200	[9,600]	[10,200]
230	5,800	6,200	[9,600]	[10,050]
240	5,800	6,100	[9,450]	[9,900]
250	5,700	6,000	[9,300]	[9,900]

See pages 4 and 5 for Propping Table notes.

Installing Fielders KF70®

Temporary Propping

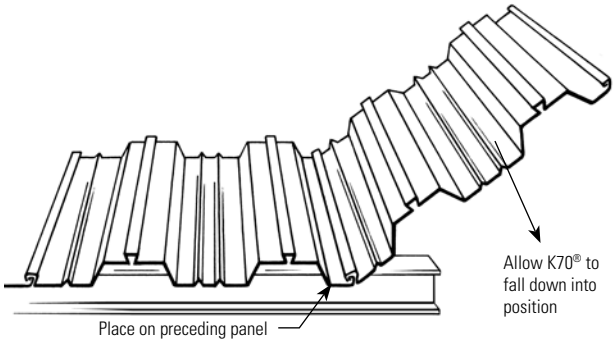
If temporary propping is required (refer to the temporary propping tables), props should be placed at the correct centres prior to laying the KF70® sheets. Generally, timber or steel bearers with a minimum dimension of 75mm x 75mm are used on vertical props. The props should be installed so as to prevent settlement during loading by wet concrete and other construction loads.

300mm wide ply strips, 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.

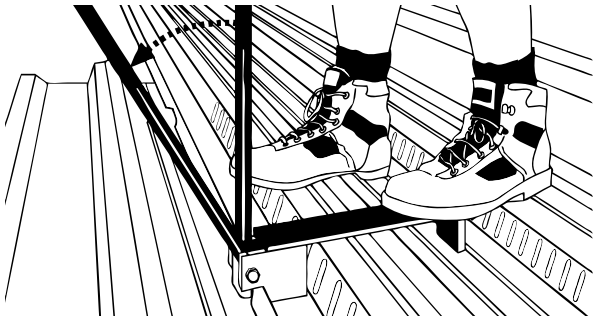
Laying KF70®

1. Place the KF70® 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 KF70® by locking the larger female rib over the male rib as shown in the diagram below.

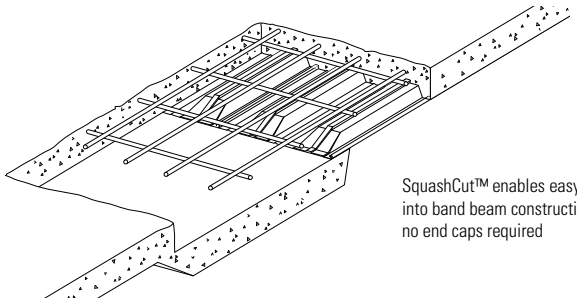


Crimping KF70®

1. In situations where this tilting of the steel is not possible, Fielders are able to produce the KF70® profile with an open lap on request. The laps must be crimped together to enable sheets to be lapped, as shown in the diagram. Sheets need to be crimped at 450mm centres.



SquashCut™/Band Beam Detail

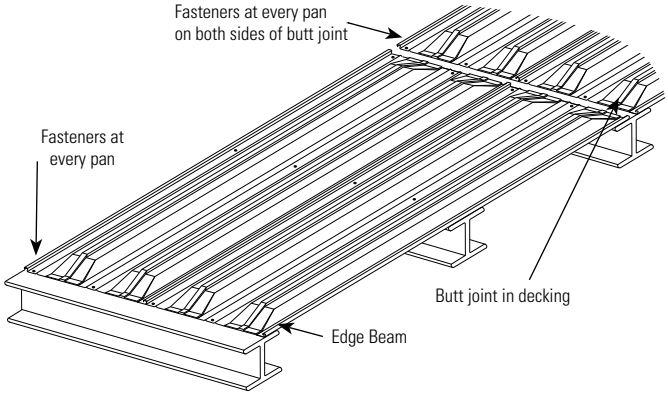


Fasteners and Locations

The decking must be positively fixed 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 KF70® 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. KF70® edge-form is usually shot-fired to the steel support structure or to the KF70® 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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