KWIKSTAGE
PROPPING

R·M·D KWIKFORM

People Make the Difference

RMD Kwikform is a powerful team comprising the skills, experience and energy of over 1,000 men and women in 17 countries. Totally diverse in nationality, culture, language and background. Totally united in the pursuit of customer satisfaction.

Our Experience & Expertise

Kwikstage is one of the most universally established scaffolds throughout the world. Used for propping and decking applications, it's the inherent simplicity that makes **Kwikstage** a versatile, efficient and cost effective alternative to traditional loose props.

It's the result of over 50 years experience gained on major projects throughout the world. What's more, our network of local branches means when you deal with RMD Kwikform, you talk to people who understand the working environment, technical difficulties and challenges you face.

Client:
Karagulla.

Project:
Phonecia Hotel, Beirut, Lebanon.

Client:
RNK.

Project:
Office Building, Beirut, Lebanon.

Client:
Cebarco WCT JV.

Project:
City Centre Hotel, Bahrain.

Client:
Gulfco.

Project:
Noora, RAK.

Client:
Al Habtoor - Murray Roberts JV.

Project:
Madinat Jumeirah, Dubai, UAE.

Applications

Kwikstage propping and decking is a highly versatile, competitive slab formwork system capable of being used in many applications including:

- **Commercial buildings**
- **Shopping malls**
- **High rise residential apartments**
- **Airport terminals**
- **Light industrial slabs**
- **Bridge Decks**

Client:
Khansaheb Civil Engineering L.L.C..

Project:
Wafi Centre, Dubai, UAE.

Client:
Nass, Murray & Roberts JV.

Project:
Raffles City, Bahrain.

Client:
Al Naboodah Contracting Co.

Project:
Dubai Bypass Road, UAE.

Client:
Al Khodari.

Project:
Saudi Al Khodari, Saudi Arabia.

Client:
Al-Enmma Real Estimating Co.

Project:
Al Asffour Tower, Kuwait City, Kuwait.

Features & Benefits

- **Quick striking system,** enabling early removal of deck beams and plywood, saving time and cost.
- **Variable ledger positions** to suit leg loading, increasing flexibility of the system.
- **Make-up areas around columns can be supported simply** by using infill beams, saving customer time and money.
- **Braces fit to the standards using half couplers** ensuring no loose parts, minimising loss and damage charges.

Client:
Cebarco WCT JV.

Project:
City Centre Hotel, Bahrain.

- **Quick and easy to erect propping ties** are fixed to the vertical standards using captive wedge connections, saving time.
- **Simple erection procedure** ensures stringent safety levels can be easily achieved.
- **As an alternative to steel decking and infill beams,** Kwikstage Propping can also be used in conjunction with RMD Kwikform's GTX and aluminium beams for soffit support to slabs of all depths.

Client:
Odebrecht, TAV & CCC JV.

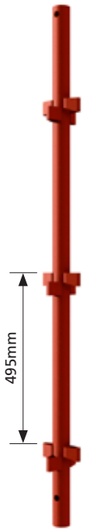
Project:
Tripoli Airport, Libya.

Client:
Nass Burhan JV.

Project:
King Hamad Hospital, Bahrain.

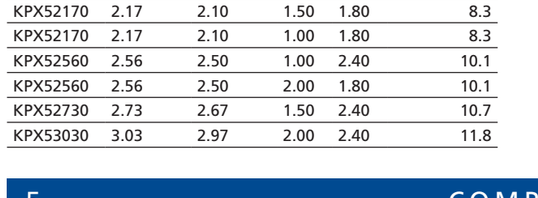
Client:
Al-Enmma Real Estimating Co.

Project:
Al Asffour Tower, Kuwait City, Kuwait.



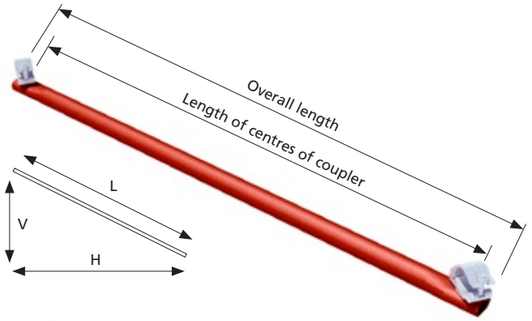
Standards - Open Ended

Code	Length (m)	Weight (Kg)
KPX31000	0.99	5.2
KPX31500	1.49	7.8
KPX32000	1.98	10.4
KPX32500	2.49	13.0
KPX33000	2.97	15.62



Propping Ties

Code	Centres of standards (m)	O/A Length (m)	Weight (Kg)
KPX42400	2.4	2.35	9.1
KPX41800	1.8	1.75	7.0
KPX41200	1.2	1.15	4.8
KPX40900	0.9	0.85	3.8
KPX40600	0.6	0.55	2.7

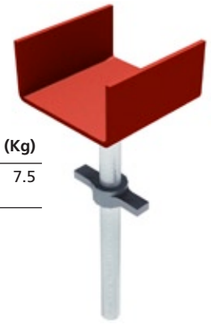


Coupler Braces

Code	Length O/A (m)	Length C/C (m)	V (m)	H (m)	Weight (Kg)
KPX51470	1.47	1.40	1.00	1.20	6.2
KPX51790	1.76	1.70	1.50	1.20	7.3
KPX52170	2.17	2.10	2.00	1.20	8.3
KPX52170	2.17	2.10	1.50	1.80	8.3
KPX52170	2.17	2.10	1.00	1.80	8.3
KPX52560	2.56	2.50	1.00	2.40	10.1
KPX52560	2.56	2.50	2.00	1.80	10.1
KPX52730	2.73	2.67	1.50	2.40	10.7
KPX53030	3.03	2.97	2.00	2.40	11.8

Adjustable 'U' Head

Code	Description	Weight (Kg)
KPM00017	Adjustable 'U' Head 186mm E/P Range = 40 - 610mm	7.5

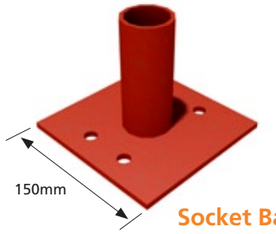


Socket 'U' Head

Code	Description	Weight (Kg)
KPM00016	'U' Head with Socket 6mm	4.2
KPM00018	'U' Head with Socket 8mm	5.4

Flanged Spigot Adaptor

Code	Description	Weight (Kg)
KPM00006	Spigot Adaptor	0.7

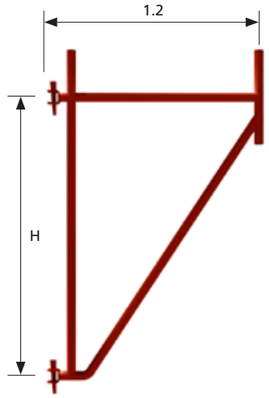


Socket Base

Code	Height	Weight (Kg)
KPX20004	114 (mm)	1.5

Cantilever Beam Frame

Code	Length (m)	Weight (Kg)
KPM00012	1.5	21.30
KPM00013	1.0	19.59



Spigot Jack

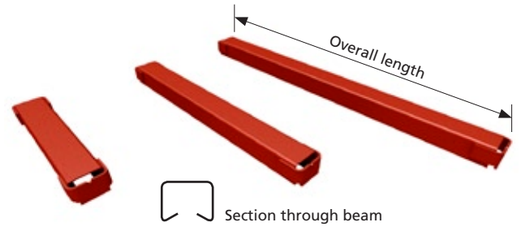
Code	Adjustment (mm)	Weight (Kg)
KSX10017	Spigot Jack (Hollow) Range = 80 - 565mm	3.61

Drophead

Code	Max axial load (kN)	Weight (Kg)
KPX80001	40	6.13

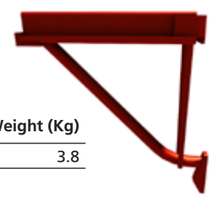
Adjustable Base Jack

Code	Description	Weight (Kg)
KPM00014	Adjustable Base Jack Range = 40 - 610mm	3.9
KPX20002	HD Adjustable Base	5.5



Infill Beams

Code	Length to centres of supports (m)	Weight (Kg)
KPX70120	1.2	5.51
KPX70900	0.9	4.13
KPX70600	0.6	2.73

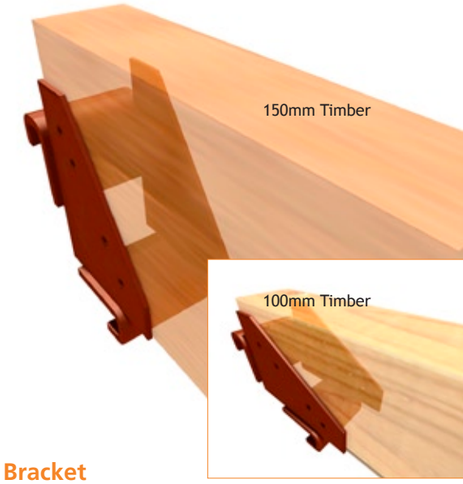


Cantilever Deck Beam

Code	Description	Weight (Kg)
KPM00020	Cantilever Deck Beam	3.8

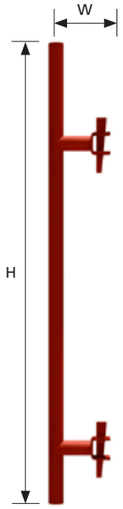
Drophead Extension

Code	Description	Weight (Kg)
KPX80009	Drophead Extension	2.2



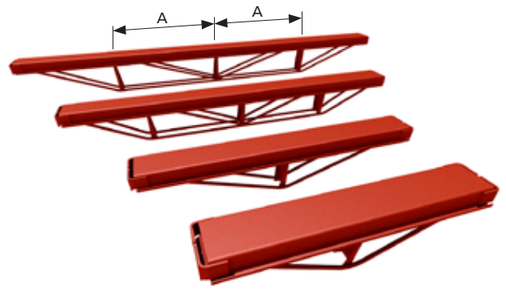
Decking Infill Bracket

Code	SWL (kN)	Weight (Kg)
KPM00008	5	1.0



Internal Beam Bracket

Code	W (m)	H (m)	Weight (Kg)
KPX11000	0.2	1.0	5.8
KPX11500	0.2	1.5	7.6



Decking Beams

Code	Grid Centres (m)	'A' (m)	Weight (Kg)
KPX72400	2.4	0.622	22.8
KPX71800	1.8	0.470	17.5
KPX71200	1.2	-	9.5
KPX70901	0.9	-	7.57

Erection Procedure

1

Two operatives place open ended standards over base jacks that have been pre-adjusted to approximately the correct height.

The operators then hold the standards/bases vertical and insert a ledger/propping tie into the lowest set of pressings on the standard (they do not fully tighten the captive wedges at this point).

2

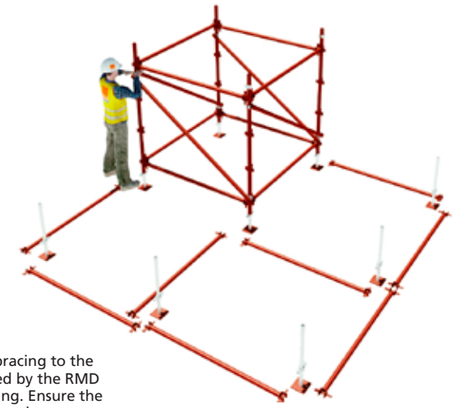
The operatives lean the constructed frame inwards and, whilst holding it with one hand, attach propping ties into the first set of pressings at the bottom of the standard. The frame is now self supporting.

3

The operatives each prepare another leg (standard & base) and connect these to the free ends of propping ties protruding from the initial frame.

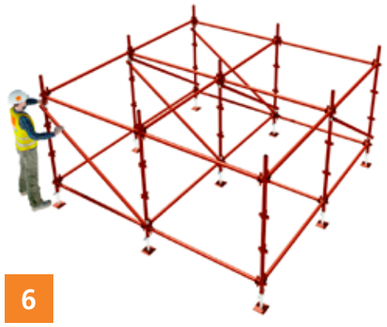
4

The first unit of the grid is completed by tying the legs to one another with propping ties to the required set of pressings on the standards and leveling-off and squaring up. Once this is completed, wedges are hammered up tight. Always refer to RMD Kwikform design drawing.



5

Place diagonal bracing to the tower as required by the RMD Kwikform drawing. Ensure the tower is vertical and square prior to tightening the couplers.



6

Continue erecting the lower standards in a similar way adding bracing as required by the RMD Kwikform Drawing.

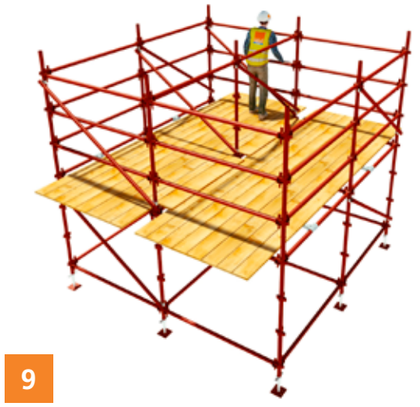
7

Once the bottom lift is complete, place scaffold boards on the top propping tie (using intermediate board supports where required) to provide a platform to erect the next level of standards.

8

At all times operatives should comply with local safety regulations by either using approved fall arrest equipment or by providing temporary guardrails as shown.

Continue erecting remaining levels of standards and propping ties in accordance with the RMD Kwikform drawing.



9

Move or extend the working platform to the remaining areas and erect upper levels of standards and propping ties.

10

Working from the boarded platform, adjust the Adjustable U-Heads to approximate required jack extension and insert into the top level of open ended standards.

11

Working from the established boarded platform, insert primary beams into the centre of the U-Head. Twist the U-Head and insert wedges to ensure the primary beams are central.

12

Erect the secondary beams and fix to the Primary Beams using a minimum of 2 GTX Cleats per secondary beam.

13

Place the plywood and secure to secondary beams using suitable screws or nails. Erect perimeter guardrails and toe boards to comply with local safety regulations.

Loading Data

Kwikstage, scaffolding with 'Propping ties' is suitable for support applications with 27.5kN leg loading when the vertical dimensions between the horizontal members is at a maximum of 2m vertical centres. The leg load can be increased to 40kN when the maximum vertical distance between the horizontal members is limited to 1.5m, and 55kN leg load can be accommodated when the horizontal members are at 1.0m vertical centres.

Wherever **Kwikstage** scaffolding is used for support, bracing will be necessary to provide lateral stability, overall stability, erection stability and node point stability for the effective length of standards. Installing one bracing pattern often provides sufficient bracing to cover the other cases. The design of bracing and the horizontal restraint force required to be transmitted through the braces is specified in BS 5975: 2008 'Falsework'.

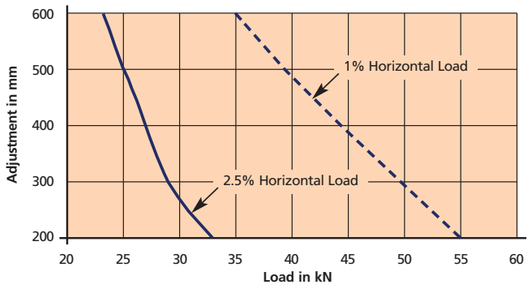
Where head fixity can be guaranteed through the plywood decking restraining the head of the system between columns and/or walls, then bracing for 1% of the vertical load in all standards may be used in the design of the jacks (provided the columns and walls can restrain these loads).

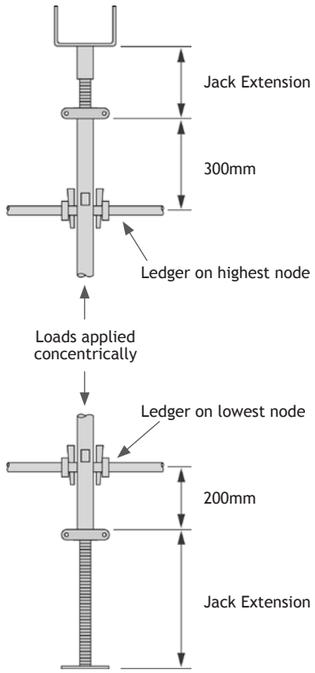
BS5975 specifies a minimum lateral stability criteria equivalent to the greater of either: 2.5% of the vertical load in the standards acting horizontally at the point of application of the load, or horizontal forces from wind, erection tolerances, non vertically, concrete pressures and other forces acting as described in the code. The SWL of a coupler brace is 6.25kN, this being the slip capacity of the connection in tension or compression. The requirement to brace the head and base jacks will depend on their individual extensions and the load being carried, as detailed below.

It is assumed standards are connected by ledgers and braced between the uppermost and lowest node points and all nodes in between.

Kwikstage Code KPM00017 Adjustable 'U' Head Jack Loading Graph.

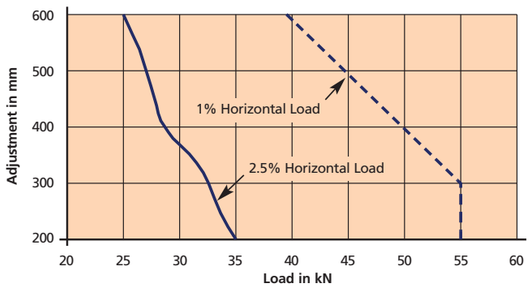
Unbraced Condition (300mm from end of Standard to first node).



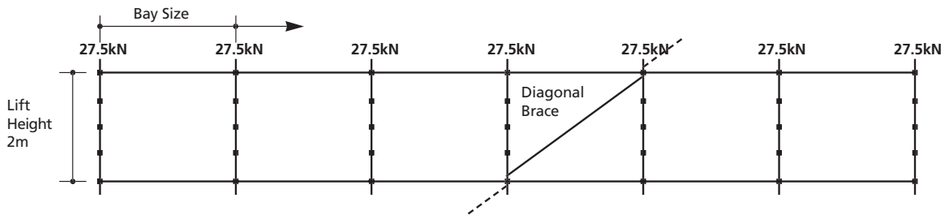


Kwikstage Code KPM00014 Adjustable Base Jack Allowable Loading Graph.

Unbraced Condition (200mm from end of Standard to first node).

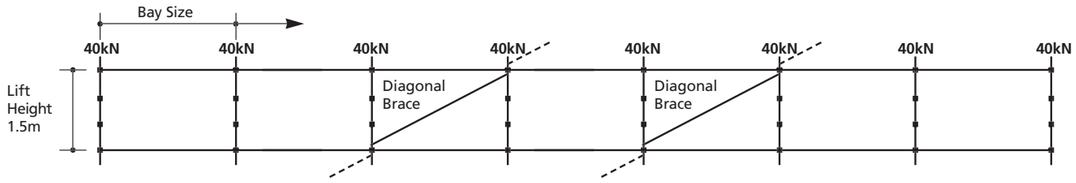


Lacing & Bracing Details



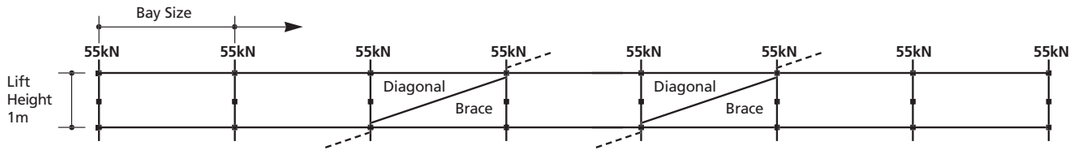
Diagonal Bracing - 27.5kN Capacity (@2.5% of the Vertical Load)

Bay Size (mm)	Code	No. of Bays per Brace	Lift Height (m)
2400	KPX53030	7	2.0
1800	KPX52560	7	2.0
1200	KPX52170	6	2.0



Diagonal Bracing - 40kN Capacity (@2.5% of the Vertical Load)

Bay Size (mm)	Code	No. of Bays per Brace	Lift Height (m)
2400	KPX52730	5	1.5
1800	KPX52170	5	1.5
1200	KPX51790	5	1.5



Diagonal Bracing - 55kN Capacity (@2.5% of the Vertical Load)

Bay Size (mm)	Code	No. of Bays per Brace	Lift Height (m)
2400	KPX52560	4	1.0
1800	KPX52170	4	1.0
1200	KPX51470	4	1.0

Safe Working Loads for Decking Beams

The decking beams span between dropheads or between decking beams running in the opposite direction. The system is designed to support a load of 40kN on any bay. This therefore gives a max load on any supporting leg of 40kN. This can be equated to a slab thickness for the various grids normally obtainable from Rapid Stage decking. This enables the load distribution to be derived to ensure individual beams are not overloaded.

Grid Centres (m)	O/A Length (m)	SWL (kN) (UDL)	SWL (kN) Point Load on Node(s)
2.4	2.28	40	10
1.8	1.68	40	10
1.2	1.08	40	20

Grid Size (m)	Concrete Slab Thickness (mm)
2.4 x 1.2	459
2.4 x 1.8	290
2.4 x 2.4	198
1.8 x 1.2	627
1.8 x 1.8	403
1.2 x 1.2	991

Note: Concrete weight, decking self weight and superimposed load assumed in accordance with BS5975:2008.

For further information on load capacities, please consult your local RMD Kwikform Technical Office.

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