

# Timber-frame ceiling construction

Ceiling construction is one of the most important structural element of the building. In this example we will estimate one of the most popular timber-frame ceiling construction formed in situ. In addition timber-frame construction is used to support for the floor above.

## Estimation conditions

- materials are delivered on site
- internal transport horizontal and vertical is included in the average building situation
- labour included fitting light scaffolding up to 4m high
- calculation of materials includes an allowance for waste
- water, electricity, sand paper and other small materials are added with 1,5% rate calculated from basic materials

## Sequece of operation

- take a measurement of area for timber-frame ceiling construction and mark axis
- joists are spaced at 400mm centres
- fix steel wall plates to the wall
- cut to size and join joists into a joists hangers
- all metal parts like joists hangers or restraint straps are not included in this estimation
- cut to size and join noggings creating frame as shown on a drawing below
- joists and noggings screwed together create one unit
- cover with sheet of plywood 18mm

## 1sqm of timber-frame ceiling construction

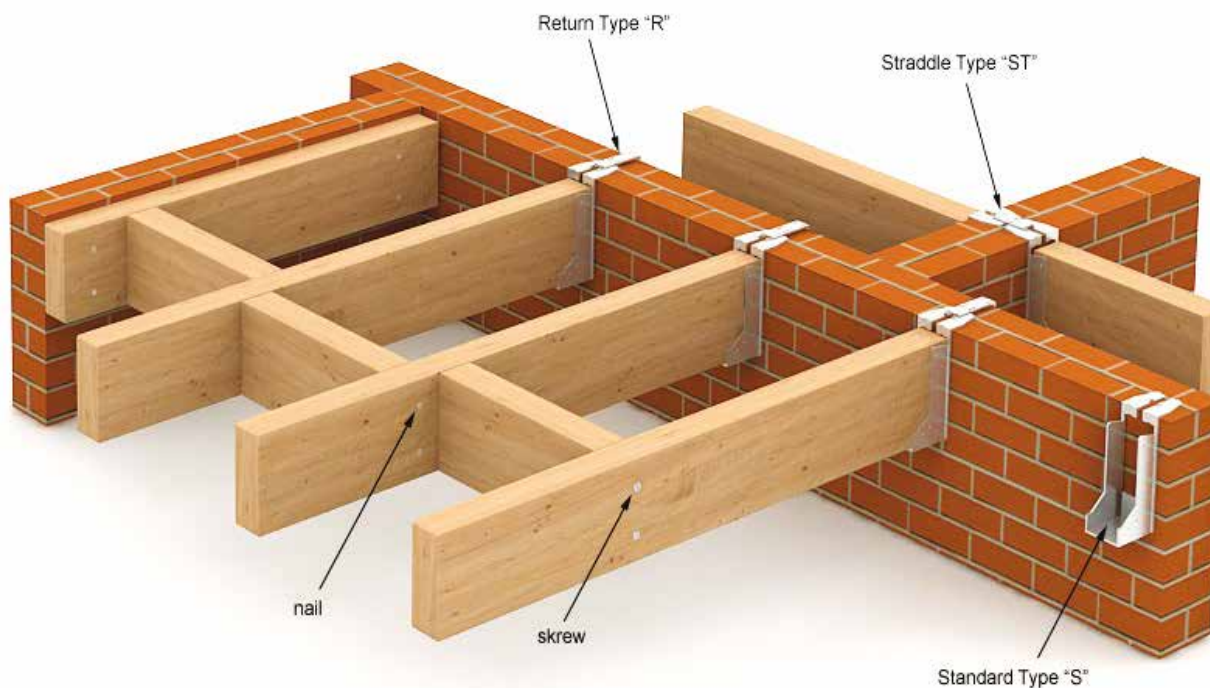
No	Material	Measurement	Unit	Price* excl VAT [unit]	Coverage per 1sqm	Price excl. VAT for 1m <sup>2</sup>	Price incl. VAT for 1m <sup>2</sup>
1	Sawn timber for joists	47*200*4800mm	length	£18.61	0.60 length/m <sup>2</sup>	£11.17	£13.40
2	Sawn timber for noggings	47*200*4800mm	length	£18.61	0.463 length/m <sup>2</sup>	£8.62	£10.34
3	Wood screw	KDH 5*100mm	kg	£4.99	0.10 kg/m <sup>2</sup>	£0.50	£0.60
4	Wood screw	KDH 5*50mm	kg	£4.99	0.10 pcs/m <sup>2</sup>	£0.50	£0.60
5	WBP plywood 18mm	18*1220*2440mm	sheet	£34.96	0.37 sh/m <sup>2</sup>	£12.94	£15.53
6	Additional materials 1.5%					£0.51	£0.61
<b>Total – regular prices</b>						<b>£34.24</b>	<b>£41.09*</b>

\* materials available at above Retail Prices at IBB Polish Building Wholesale Ltd, London – before discounts

### Expenditure of Labour for making 1sqm of ceiling construction

No	Description	Labour hours	Company rate [GBP] excl. VAT	Rate [GBP] per 1sqm excl.VAT	Rate [GBP] per 1sqm incl.VAT
1	Fixing timber joists 200mm@400mm	2.385 lh/m <sup>2</sup>	£27.00	£64.40	£77.28
2	Fixing noggings 200mm@1200mm	0.90 lh/m <sup>2</sup>	£27.00	£24.30	£29.16
3	Sheet covering WBP 18mm	0.24 lh/m <sup>2</sup>	£27.00	£6.48	£7.78
<b>Total</b>		<b>3.525 lh/m<sup>2</sup></b>		<b>£95.18</b>	<b>£114.22</b>

**Attention:** in our quotation we have only described positions marked \*, the rest you have to calculate individually eg. fixing corners with mesh according to how many reveals there are on the elevation, it is also important that for reveals you have to increase the quotation, the same for scaffolding or colour render.



**Price per 1sqm of timber-frame ceiling construction = M + L = 34.24 + 95.18 = L 129.42 net**

#### Important:

- timber frame ceilings should be fixed only to loadbearing walls and transfer their load to the foundation
- timber joists should be dry and sawn
- use proper size of joists hangers
- use proper zinc plated screws
- galvanised or stainless steel straps are required to prevent movement of wall

#### Attention!

Our norms and rates should be taken as a guide only and there are no obligations for anybody to adhere to them. You have to take sole responsibility and apply your own rates to your quotations. Cost of materials can vary from prices shown. We cannot accept any responsibility for anyone using this information – you must make your own checks.