

 **BEKAERT**

better together

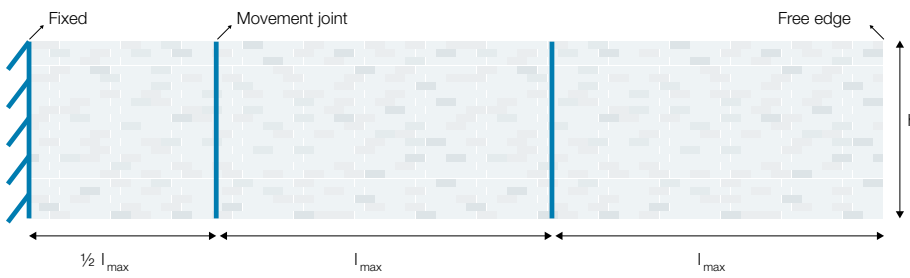
Calculated crack control reassuring performance for exterior masonry

Murfor[®] compact E

Murfor[®] Compact helps resist thermal and shrinkage stresses in masonry walls



Murfor® Compact movement joint tables



for a maximum wall thickness of $[t_{max}]$

Spacing between movement joint

≤ 102.5 mm
1x Murfor® Compact E-70 per reinforced joint

≤ 140 mm
1x Murfor® Compact E-70 per reinforced joint

≤ 215 mm
1x Murfor® Compact E-70 per reinforced joint

≤ 215 mm
2x Murfor® Compact E-70 per reinforced joint

l_{max}
[m]

s_{max}
[mm]

of reinforced joints / m
[#/m]

s_{max}
[mm]

of reinforced joints / m
[#/m]

s_{max}
[mm]

of reinforced joints / m
[#/m]

s_{max}
[mm]

of reinforced joints / m
[#/m]

Block/ brick material : Clay



$l_{max} \leq 15$	450	2.2	-	-	-	-	-	-
$l_{max} \leq 18$	225	4.4	-	-	-	-	-	-

Block/ brick material: concrete



$l_{max} \leq 7.5$	-	-	450	2.2	300	3.4	600	1.7
$l_{max} \leq 9$	-	-	225	4.4	150	6.7	300	3.4

l_{max} = Spacing between movement joints

s_{max} = maximum spacing between reinforced joints

There are two alternative options for applying the design table on a project,

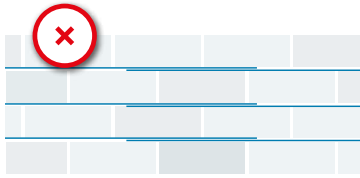
- I. Round down (s_{max}) to the nearest multiple of the actual joint distance.
- II. Multiply the total wall height (h) by the '# of layers / m' and round up to the next integer.

Construction guidelines:

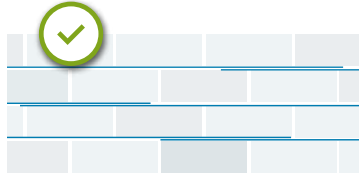
- M5 \leq mortar \leq M12
- general purpose mortar
- filled or unfilled head joints
- see EN 1996-1-1 and ETA 18/0316
- Overlapping length \geq 500 mm
- Overlaps must not be positioned in the same vertical plane
- spread bed joint reinforcement uniformly across height



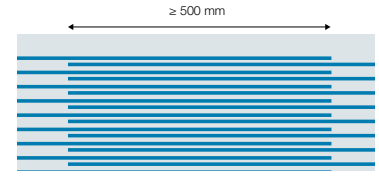
Don't position overlaps on the same vertical face.



side view of the wall



plan view on mortar joint



Example:

Block/ brick material: clay

Due to architectural limitations, a movement joint needs to be shifted to be positioned behind a down pipe. This extends the distance between the movement joints to 14m. The wall has a thickness of 102.5 mm and is made from clay bricks.

Spacing between movement joint [m]	l_{max}	s_{max}	# of reinforced joints / m	s_{max}	# of reinforced joints / m
$l_{max} \leq 15$		450	2.2	460	2.2
$l_{max} \leq 18$		225	4.4	230	4.4

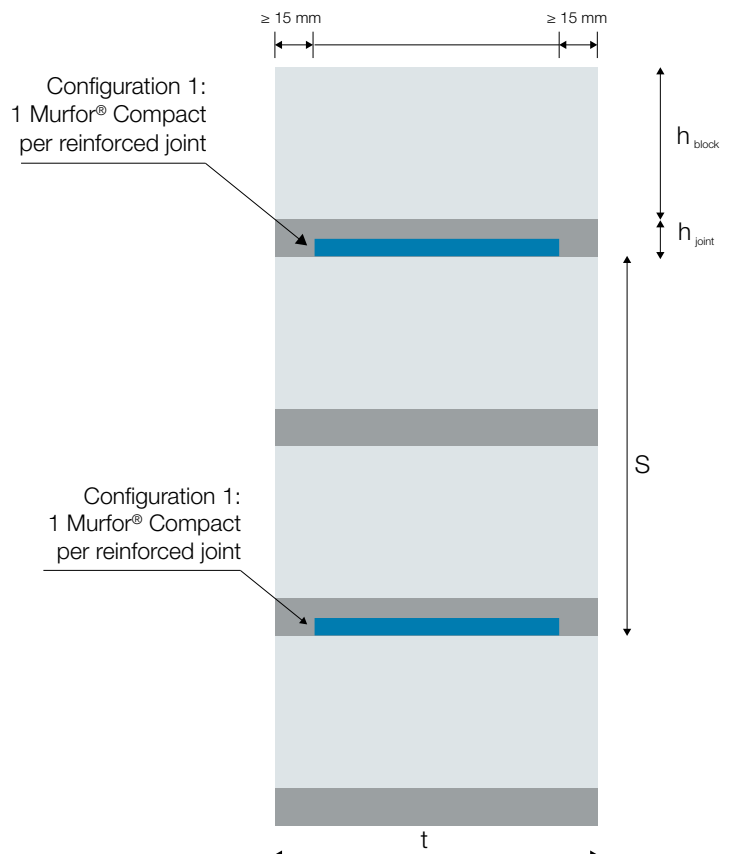
In order to extend the movement joint spacing to 14 m, the following reinforcement is needed:

- A) **Murfor® Compact E-70** at a *maximum vertical spacing of 450 mm*.
- B) **Murfor® Compact E-70** at a *minimum of 2.2 reinforced joints in a meter height*.

Assuming a brick height of 65mm and a joint thickness of 10mm.

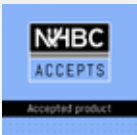
This gives the following:

- A** $h_{block} + h_{joint} = 65 + 10 = 75$ mm
dividing 450 mm by 75 mm, gives 6,
therefore **Murfor® Compact E-70** should be introduced at every 6thth joint or $s = 450$ mm.
- B** The total wall height is 3 m, while the table indicates that we require 2.2 reinforced joints per m with **Murfor® Compact E-70**, therefore the total number of reinforced joints are:
 $2.2 \times 3 = 6.6$ joints. Rounding this up to the next integer gives 7, which indicates that a total of 7 joints have to be reinforced evenly across the total height.



Murfor® Compact E: outstanding reinforcement for exterior masonry

The ETA-approved Murfor® Compact E is a high-strength masonry reinforcement solution, available on an easy-to-use roll. It offers optimal crack control and exceptional exterior masonry strengthening. The extremely high yield strength of the mesh makes Murfor® Compact E suitable for complex and challenging designs.



ETA approved

Why choose Bekaert

[bekaert.com/murfor-compact](https://www.bekaert.com/murfor-compact)

Bekaert steel wire bed joint reinforcement solutions can be adapted to different interior and exterior masonry applications and contribute to buildings and constructions that meet regional and international standards. To help you apply optimal reinforcement to your masonry structure, Bekaert also provides advanced technical calculations and recommendations.

More information

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