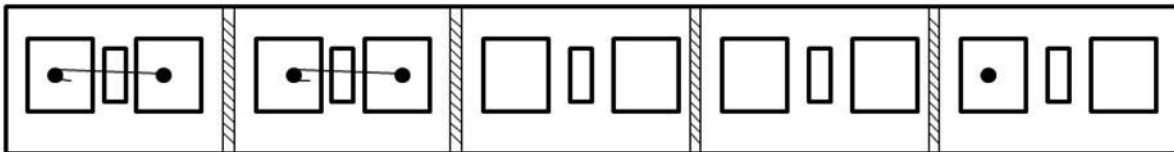


## DISPOSITION

- The bricks should be saturated by immersion at least two hours before putting. The pieces must be ready and unbroken.
- Using templates, traces or tapes, the location should be shall be located and strengthened, leaving said reinforcement in the slab foundation.
- Flexural reinforcement (placed at the ends of the walls) should be continuous and suitably anchored to the foundation.
 

Steel bending (placed at the ends of the walls), must be continuous and conveniently anchored in the foundation
- The steel bends are placed in the first 2 to 4 holes at the ends of the walls.
 

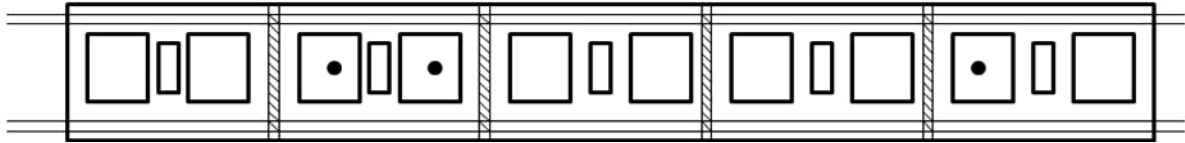
This vertical reinforcement shall be continuous from the foundation up and can only overlap in the mezzanines using 60 (rod diameter) and the length of overlap.



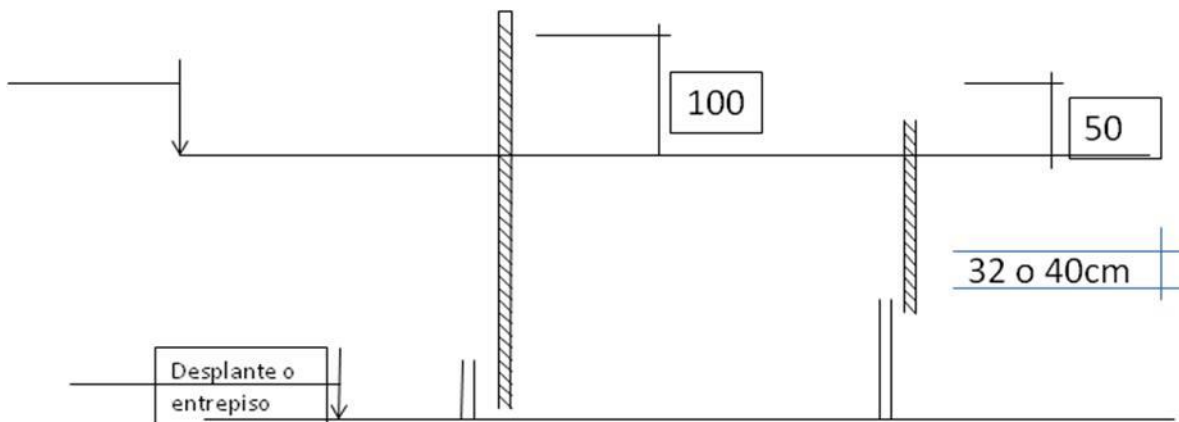
- Join in each course flexural strengthening using staples to 180 ° (see drawing above).
 

These clips are heavy duty rod 60, 3/16 "or ¼" diameter ( $f = 6000$  kg / cm<sup>2</sup>), or grade rod 5/16 42 "diameter. Do not use wire for reinforcement of masonry.





- The parts assemble on a cement base of approximately 2 cm. The courses will trap them ensuring that the cement is placed in both horizontal and vertical joints; the thickness of the boards will be about 1 cm if you are not replacing them horizontal reinforcement (unreinforced masonry), or 1.5 cm if horizontal reinforcement (reinforced masonry) sets.
- The placement of the pieces must be careful not to spill cement in the gaps that will have vertical reinforcement, so that when the wall is up to its' full height, or where it is put to intermediate point, it can be placed without hinder the overlap of reinforcement, which have a length of 32cm - if high strength rod 60 or 40cm if rod grade is 42. Afterwards, strain the hole with the same cement, picking a rod that penetrates the cement, leaving alternately projecting tips.



- The mortars should be prepared with the least amount of water that allows easy installation, no cement that has more than two hours of processed should be used. The cement recommended for piecing formats 24x12x6, 20x10x10, 20x14x10, 29x14x9, 20x10x6 are:

Mortar Type	volumen proportion of		
	Cement	Cal	Sand



A	1	0	3
B	1	0.25	3.5
C**	1	0.50	4

✚ The nominal design strength (1m) to axial load shall be as follows.

	Type of Piece	Mortar	F*m Kg/cm <sup>2</sup>
20x10x10	T-4	A	75
24x12x6	T-5	B	75
20x14x10	T-6	C	45
29x14x9	T-7	C	45
20x10x6	T-3	B	75

**If using epoxy cement or cement Grout Fester, F \* M IS INCREASING AND MAY TAKE AS A DESIGN VALUE 120kgs / cm<sup>2</sup>. The nominal shear resistance of the masonry is built with these parts:**

✚ La resistencia nominal a cortante de las mamposterías construidas con estas piezas es:

Type Of piece	Mortar	v* Kg/cm <sup>2</sup>
T-4	A	5.0
	B	6.0
	C	3.5
T-5	A	5.0
	B	6.0
	C	3.5
T-6	A	5.0
	B	6.0
	C	3.5

✚ If using Grout Fester cement shear strength will be the same as for cements A: whereas if you use an epoxy cement, the nominal design strength in shear v \* is taken equal to 8kg/cm<sup>2</sup>.

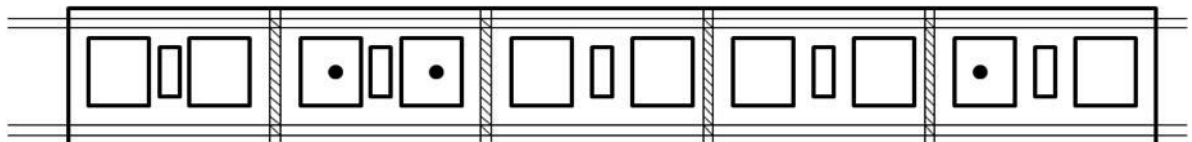


For the design procedure to be discussed later, Fr = 0.4 is taken,

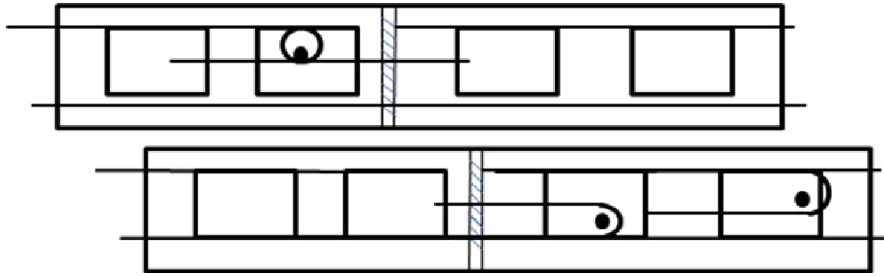
if horizontal reinforcement between the cement joints is not placed, whereas if you put this horizontal reinforcement it can be increased to 25%. v \* indicated in the above table ; and size separation effort follows.

Type of piece	Mortar	Reinforcement TEC-60	v* Kg/cm2
T-4	A	2 de 5/16	5.0
	B	2 de 5/16	5.0
	C	2 de 1/4	5.0
T-5	A	2 de 5/16	7.0
	B	2 de 5/16	6.0
	C	2 de 1/4	6.0
T-6	A	2 de 5/16	5.0
	B	2 de 5/16	5.0
	C	2 de 1/4	5.0

- The high strength rod of 60 resistance is recommended because they have small diameters and the steel is of high fluence (6000 Kgs/cm2), Grade 42 rods develop equivalent creep forces can be used, but will involve increasing the size of the boards because they will be of larger diameter.



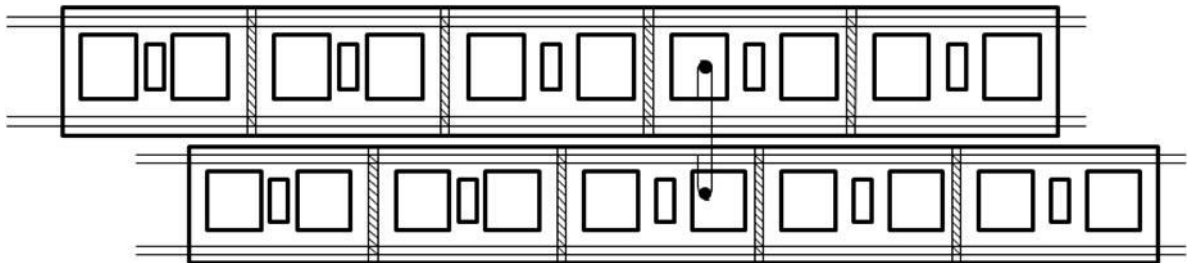
- This horizontal reinforcement does not overlap and should be anchored in the middle or at the ends of the construction, preferably with your hook bent 180 degrees around the vertical, reinforcing an interior castle, in which the hole is completely filled with cement.



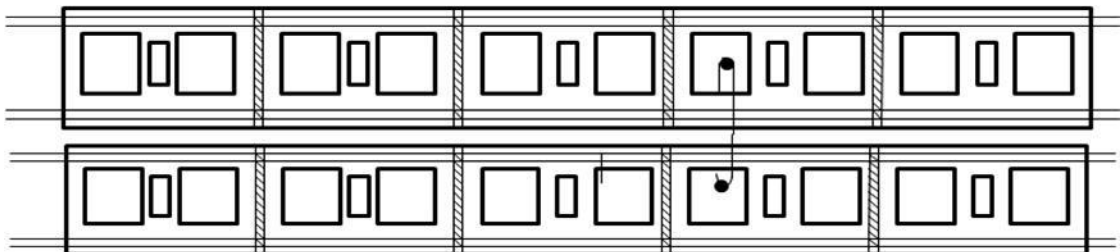
- In the lower and upper walls, the horizontal reinforcement should be half of the above-stated distance.

### CONSTRUCTION DETAILS

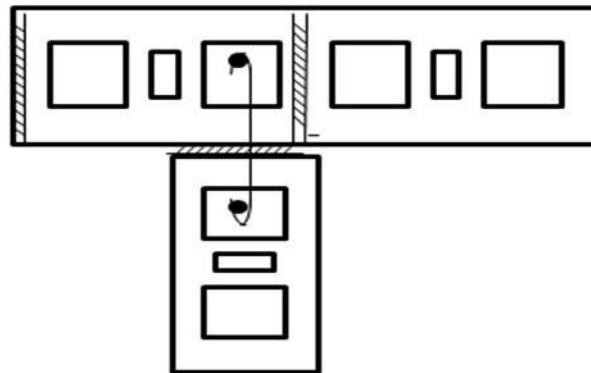
- In double walls there must be a cramp on which must match up.



- In walls that are not overhung, the reinforcement or the connection details are similar to those walls that trap them if the parts.



- The connection between cross walls must be achieved by linking each one to the walls using heavy heavy duty clamps rod 60 5/16 "or 3/8" grade 42 in each course




- The corner joint of perpendicular walls must alternate the parts of both walls and be linked together by cramps of each row.
- In very high walls with no structural function, they should be checked for the condition of winds or earthquakes, acting perpendicular to the plane of the wall whilst assuming the vertical reinforcement is placed in the center of the hollow part.
- Nonstructural walls separate columns at a distance equal to  $0.007 * Q * h$ , where h is the height from floor to lower bed slab or girder, Q is the factor of seismic behavior of the structure. They should also be allowed a vertical clearance between the slab and the wall or girder: this clearance and separation with the column is not covered with any rigid element (flattened, concrete, etc..) that should allow the structure deforms freely.
- Walls over 2.5 meters high should add a intermediate chain when more every 20 t, where t is the thickness of the piece.

Piece		Distance between dalas
Type	ancho t	
T-4	10cm	200cm
T-5	12cm	240cm
T-6	14cm	280cm

- In the case of very long walls, one does not require expansion joints, only that the work must finish on one building.



 The masonry made of these pieces will be designed as indicated in the Supplementary Standards for Design and Construction of Masonry Structures.

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