

Diagram illustrating the reinforcement details for a reinforced concrete frame joint, showing the column, beam, and slab reinforcement layout.

Column Reinforcement:

- Vertical bars: $C1$ and $C2(T1)$, $C3(T2)$
- Dimensions: $250 < \text{ch} < 400 (T1)$, $150 < \text{ch} < 250 (T2)$

Beam Reinforcement:

- Top bars: $A1(D=20\text{cm})P/T1$ and $A2(D=20\text{cm})P/T2$
- Dimensions: $250(T1)$, $150(T2)$

Slab Reinforcement:

- Top bars: $T1=500$ and $T2=400$

Other Dimensions:

- Bottom slab thickness: $160(T1)$, $130(T2)$

Technical drawing of a mechanical assembly, likely a bracket or support structure, showing dimensions and labels.

Dimensions:

- 15 (Top left corner)
- 35 (Top left corner)
- 100 (Top right corner)
- 37 (Top right corner)
- 15 (Middle left corner)
- 25 (Middle left corner)
- 35 (Bottom left corner)
- 25 (Bottom left corner)
- 28 (Bottom left corner)
- 85 (Bottom left corner)

Labels:

- N2-5 ϕ 5.0-107
- N3-3 ϕ 5.0-87
- N4-2 ϕ 12.5-173
- T1-N1-2 ϕ 8.0-634
- T2-N1 ϕ -2 ϕ 8.0-534
- VAR.

Angles:

- 30° (Angle between two lines)

Figure 10 shows three detail drawings of the connection between the column and the beam for different beam types: C1(20x20), C2(20x30), and C3(20x30). Each drawing illustrates the reinforcement layout and dimensions for the column and beam.

- C1(20x20):** The column is square with 20mm diameter bars. The beam is 20mm wide and 20mm high. The reinforcement layout shows 4 bars (N5-4#6.3-CORR.) in the column and 8 bars (N6-8#5.0-C.20-80) in the beam.
- C2(20x30):** The column is rectangular with 20mm diameter bars. The beam is 30mm wide and 30mm high. The reinforcement layout shows 4 bars (N7-4#10-CORR.) and 2 bars (N8-2#6.3-CORR.) in the column, and 8 bars (N9-8#5.0-C.20-100) in the beam.
- C3(20x30):** The column is rectangular with 20mm diameter bars. The beam is 30mm wide and 30mm high. The reinforcement layout shows 4 bars (N7-4#10-CORR.) in the column and 8 bars (N9-8#5.0-C.20-100) in the beam.

Figure 1 illustrates the layout of reinforcement bars for a circular slab. The diagrams are labeled A1 (D=20cm), A2 (D=20cm), and T1=T2 (D=20cm). Each diagram shows a top view of the slab with reinforcement bars and a side view showing the slab thickness and bar placement. The reinforcement bars are labeled as N10-5ø10-CORR. for A1, N8a-5ø8.0-CORR. for A2, and T1-N1-4ø8.0-634 and T2-N1a-4ø8.0-534 for T1=T2. The slab thickness is indicated as 15 cm in the side views.

QUADRO DE FERRO						
Pos.	Diam.	Comp. (cm)	Q.	C.Total (cm)	Total (Kg)	
1	8,0	634	4	2536	10,1	
2	5,0	107	5	535	0,9	
3	5,0	87	3	261	0,4	
4	12,5	173	2	346	3,5	
5	6,3	CORR	4	600	1,5	
6	5,0	80	8	640	1,0	
7	10,0	CORR	4	600	3,8	
8	6,3	CORR	2	300	0,8	
9	5,0	100	8	800	1,3	
10	10,0	560	15	8400	52,9	
11	5,0	73	113	8249	13,2	

CA-50-a,nb=1.5				
Comp. Total(m)				
ø5.0	ø6.3	ø8.0	ø10	ø12.5
105	9	25	90	3
Peso + 10%(Kg)				
ø5.0	ø6.3	ø8.0	ø10	ø12.5
18	2	11	62	4
TOTAL				98

QUADRO DE FERRO					
Pos.	Diam.	Comp. (cm)	Q.	C.Total (cm)	Total (Kg)
1a	8.0	534	4	2136	8.5
2	5.0	107	5	535	0.9
3	5.0	87	3	261	0.4
4	12.5	173	2	346	3.5
5	6.3	CORR	4	600	1.5
6	5.0	80	8	640	1.0
7	10	CORR	4	600	3.8
8a	8.0	380	15	5700	22.8
9	5.0	100	8	800	1.3
11	5.0	73	81	5913	9.5

CA-50-a,nb=1.5				
Comp. Total(m)				
ø5.0	ø6.3	ø8.0	ø10	ø12.5
81	6	78	6	3
Peso + 10%(Kg)				
ø5.0	ø6.3	ø8.0	ø10	ø12.5
14	2	34	4	4
TOTAL				58

NOTA:
TIRANTE T1 PARA ARRIMO COM ALTURA
VARIANDO: $2,5 \leq H < 4,0\text{m}$
TIRANTE T2 PARA ARRIMO COM ALTURA
VARIANDO: $1,5 \leq H < 2,5\text{m}$