
























































Resumo Aço Desenho de vigas	Comp. total (m)	Peso+10% (kg)	Total
CA-50 Ø6.3	266.8	72	
Ø8	89.8	39	
Ø10	274.9	186	
Ø12.5	3.6	4	
Ø16	38.9	68	369
CA-60 Ø5	926.4	160	160
Total			529

COBERTURA
Desenho de vigas
Concreto: C40, usina.rigor
Aço das barras: CA-50 e CA-60
Aço dos estribos: CA-50 e CA-60
Escala vigas 1:50
Escala seções 1:25
Escala aberturas 1:25

Elemento	Pos.	Diám.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)	
V 1	1	Ø8	4		130	155	620	2.4	
	2	Ø8	2		305	305	610	2.4	
	3	Ø8	4		240	240	960	3.8	
	4	Ø10	6		145	170	680	4.2	
	5	Ø10	4		320	320	640	1.0	
	6	Ø5	2		380	380	760	4.7	
	7	Ø10	2		290	290	580	0.9	
	8	Ø5	2		315	315	1260	7.8	
	9	Ø10	4		325	325	650	1.0	
	10	Ø5	2		195	390	780	0.6	
	11	Ø5	2		350	350	700	1.1	
	12	Ø6.3	2		617	642	1284	3.1	
	13	Ø6.3	6		614	614	3684	9.0	
	15	Ø16	2		605	650	1300	20.5	
	16	Ø6.3	1		470	470	470	1.2	
	17	Ø10	2		470	470	940	5.8	
	18	Ø6.3	1		405	405	405	1.0	
	19	Ø10	2		440	405	810	5.0	
	20	Ø6.3	1		440	440	440	1.1	
	21	Ø6.3	1		360	360	360	0.9	
	22	Ø10	2		360	360	720	4.4	
	23	Ø5	170		15	128	21760		34.2
							Total+10%	103.0	42.7
V 2	1	Ø8	4		130	155	620	2.4	
	2	Ø8	4		305	305	1220	4.8	
	3	Ø8	4		240	240	960	3.8	
	4	Ø10	4		145	170	680	4.2	
	5	Ø5	4		320	320	1280	2.0	
	6	Ø10	4		380	380	1520	9.4	
	7	Ø5	4		290	290	1160	1.8	
	8	Ø10	4		315	315	1260	7.8	
	9	Ø5	2		325	325	650	1.0	
	10	Ø6.3	4		617	642	2568	6.3	
	11	Ø6.3	6		614	614	3684	9.0	
	12	Ø6.3	2		470	470	940	2.3	
	13	Ø10	4		470	470	1880	11.6	
	14	Ø6.3	3		405	405	1215	3.0	
	15	Ø10	6		405	405	2430	15.0	
	16	Ø5	170		15	128	21760		34.2
						Total+10%	87.6	42.9	
V 3	1	Ø8	2		145	170	340	1.3	
	2	Ø8	4		260	260	1040	4.1	
	3	Ø8	2		255	255	510	2.0	
	4	Ø8	2		165	190	380	1.5	
	5	Ø10	2		170	195	390	2.4	
	6	Ø5	2		320	320	640	1.0	
	7	Ø10	6		335	335	2010	12.4	
	8	Ø5	4		280	280	1120		
	9	Ø5	2		285	285	570	0.8	
	10	Ø10	2		205	230	460	2.8	
	11	Ø6.3	4		625	650	2600	6.4	
	12	Ø6.3	4		588	588	2352	5.8	
	13	Ø6.3	1		480	480	480	1.2	
	14	Ø10	2		480	480	960	5.9	
	15	Ø6.3	2		400	400	800	2.0	
	16	Ø10	4		400	400	1600	9.9	
	17	Ø6.3	1		490	490	490	1.2	
	18	Ø10	2		495	495	990	6.1	
19	Ø5	130		15	128	16640		26.1	
						Total+10%	71.5	32.8	
V 4	1	Ø5	2		585	585	1170	1.8	
	2	Ø16	2		635	635	1270	20.0	
	3	Ø5	32		15	128	4096		6.4
							Total+10%	22.0	9.0
V 5	1	Ø8	2		165	190	380	1.5	
	2	Ø8	2		260	260	520	2.1	
	3	Ø8	2		240	240	480	1.9	
	4	Ø12.5	1		360	360	360	3.5	
	5	Ø8	2		145	170	340	1.3	
	6	Ø10	2		205	230	460	2.8	
	7	Ø5	2		285	285	570	0.9	
	8	Ø10	2		335	335	670	4.1	
	9	Ø5	2		310	310	620	1.0	
	10	Ø10	2		300	300	600	3.7	
	11	Ø5	2		175	350	700	0.5	
	12	Ø10	2		430	430	860	5.3	
	13	Ø5	2		325	325	650	1.0	
	14	Ø10	2		170	195	390	2.4	
	15	Ø6.3	2		635	650	1300	3.2	
	16	Ø6.3	4		588	588	2352	5.8	
	17	Ø16	2		635	660	1320	20.8	
	18	Ø6.3	1		480	480	480	1.2	
	19	Ø10	2		480	480	960	5.9	
	20	Ø6.3	1		435	435	435	1.1	
	21	Ø10	2		435	435	870	5.4	
	22	Ø6.3	1		345	345	345	0.8	
	23	Ø10	2		345	345	690	4.3	
	24	Ø5	130		15	128	16640		26.1
						Total+10%	84.8	32.5	
						Ø5:	0.0	159.9	
						Ø6.3:	72.2	0.0	
						Ø8:	38.9	0.0	
						Ø10:	186.5	0.0	
						Ø12.5:	3.8	0.0	
						Ø16:	67.5	0.0	
						Total:	368.9	159.9	

[illegible][illegible]