

ESTADO DO PIAUÍ
PREFEITURA MUNICIPAL DE CARACOL

Obra: Creche Tipo 2
Local: Caracol - PI
Convênio: 977950/2025

QUADRO RESUMO DAS FERRAGENS							
PEÇAS	PESO (kg)						
	Ø 5/8"	Ø 1/2"	Ø 3/8"	Ø 5/16"	Ø 1/4"	Ø 5.0	ARAME
SAPATAS	-	-	-	-	326,22	-	4,97
TOTAL	-	-	-	-	326,22	-	4,97

TOTAL GERAL FERRAGENS (kg)	331,19
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TOTAL PESO POR VOLUME (kg/m³)	10,28
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QUADRO RESUMO DO VOLUME DE CONCRETO ARMADO	
PEÇAS	VOLUME CA (m³)
SAPATAS	32,215
TOTAL	32,215

ANCORAGEM POR BARRA TIPO "L"	
BARRA LONGITUDINAL	Lb (cm)
5/8"	12,50
1/2"	12,50
3/8"	10,00
5/16"	10,00
1/4"	7,50
3/16"	5,00

BARRA TRANSVERSAL	Lb (cm)
5.0	5,00
4.2	5,00

TRASPASSE BARRAS COMPRIMIDAS (cm)	
PILARES	50,00

TRASPASSE BARRAS TRACIONADAS (cm)	
5/8"	120,00
1/2"	100,00
3/8"	80,00
5/16"	70,00
1/4"	60,00
3/16"	35,00

DIÂMETROS DOS AÇOS UTILIZADOS	
BARRAS LONGITUDINAIS	
POLEGADAS	MILIMETRO
5/8"	16.0
1/2"	12.5
3/8"	10.0
5/16"	8.0
1/4"	6.3
3/16"	5.0
	4.2

BARRAS TRANSVERSAIS	
POLEGADAS	MILIMETRO
3/16"	5.0
	4.2

PESO POR METRO	
BARRAS	kg/m
5/8"	1,60
1/2"	1,00
3/8"	0,63
5/16"	0,40
1/4"	0,25
3/16"	0,16
5.0	0,16
4.2	0,12
Arame recozido nº 18	0,01

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QUADRO DAS SAPATAS DE CONCRETO ARMADO 25 MPA							
SAPATAS	BASE	LARGURA	ALTURA	ASTX	ASTY	QUANT.	CA
S73	94	115	20+20	6 Ø 1/4"	6 Ø 1/4"	1	0,318
S71,S98	114	130	20+20	8 Ø 1/4"	8 Ø 1/4"	2	0,854
S20, S40, S43, S44, S48, S55, S66, S87, S95, P105, S107, S119, S132	104	120	20+20	7 Ø 1/4"	7 Ø 1/4"	13	4,706
S42	97	110	20+20	6 Ø 1/4"	6 Ø 1/4"	1	0,314
S17, S18, S19, S21, S22, S23, S24, S25, S27, S28, S31, S32, S33, S34, S37, S39, S49, S50, S53, S54, S58, S60, S61, S62, S69, S70, S72, S75, S78, S79, S80, S83, S84, S86, S90, S91, S99, S102, S104, S106, S108, S109, S10, S111, S112, S117, S118, S120, S121, S122, S123, S144, S126, S127, S128, S129, S131, S134,S135, S136, S137, S138, S139, S140, S141, S143, S145, S146, S147, S148, S152, S153,S154	84	100	20+20	5 Ø 1/4"	5 Ø 1/4"	73	18,177
S26, S36, S41, S45, S47, S51, S52, S56, S65, S94, S96, S97, S113, S116,S124	87	100	20+20	5 Ø 1/4"	5 Ø 1/4"	15	3,900
S74, S92	84	90	20+20	5 Ø 1/4"	5 Ø 1/4"	2	0,464
S67, S89	84	90	20+20	5 Ø 1/4"	5 Ø 1/4"	2	0,444
S68, S88	90	90	20+20	5 Ø 1/4"	5 Ø 1/4"	2	0,480
SM1, SM2	60	60	20+20	3 Ø 1/4"	3 Ø 1/4"	2	0,228
S151	200	200	20+40	10 Ø 1/4"	10 Ø 1/4"	1	2,172
S150	60	60	20+40	3 Ø 1/4"	3 Ø 1/4"	1	0,158
TOTAL VOLUME DE CONCRETO ARMADO (m³)						115	32,215

Obs:
Medidas em centímetros

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QUADRO DAS FERRAGENS POR PESO

SAPATAS	PESO (kg)						
	Ø 5/8"	Ø 1/2"	Ø 3/8"	Ø 5/16"	Ø 1/4"	Ø 5.0	ARAME
S73	-	-	-	-	3,44	-	0,05
S71,S98	-	-	-	-	10,56	-	0,19
S20, S40, S43, S44, S48, S55, S66, S87, S95, P105, S107, S119, S132	-	-	-	-	55,51	-	0,96
S42	-	-	-	-	3,41	-	0,05
S17, S18, S19, S21, S22, S23, S24, S25, S27, S28, S31, S32, S33, S34, S37, S39, S49, S50, S53, S54, S58, S60, S61, S62, S69, S70, S72, S75, S78, S79, S80, S83, S84, S86, S90, S91, S99, S102, S104, S106, S108, S109, S10, S111, S112, S117, S118, S120, S121, S122, S123, S144, S126, S127, S128, S129, S131, S134, S135, S136, S137, S138, S139, S140, S141, S143, S145, S146, S147, S148, S152, S153, S154	-	-	-	-	186,15	-	2,74
S26, S36, S41, S45, S47, S51, S52, S56, S65, S94, S96, S97, S113, S116, S124	-	-	-	-	38,81	-	0,56
S74, S92	-	-	-	-	4,85	-	0,08
S67, S89	-	-	-	-	4,85	-	0,08
S68, S88	-	-	-	-	5,00	-	0,08
SM1, SM2	-	-	-	-	2,10	-	0,03
S151	-	-	-	-	10,50	-	0,15
S150	-	-	-	-	1,05	-	0,01
TOTAL	-	-	-	-	326,22	-	4,97

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QUADRO RESUMO DAS FORMAS						
PEÇAS	VOL. (V)	LARG. (L)	COMPR. (C)	ALTURA (H)	FORMA (F)	CÁLCULO
SAPATAS (94x115)	0,318	0,94	1,15	0,29	1,21	=H*(L*2+C*2)
SAPATAS (114x130)	0,854	1,14	1,30	0,58	2,83	=H*(L*2+C*2)
SAPATAS (104x120)	4,706	1,04	1,20	3,77	16,89	=H*(L*2+C*2)
SAPATAS (97x110)	0,314	0,97	1,10	0,29	1,20	=H*(L*2+C*2)
SAPATAS (84x100)	18,177	0,84	1,00	21,64	79,64	=H*(L*2+C*2)
SAPATAS (87x100)	3,900	0,87	1,00	4,48	16,76	=H*(L*2+C*2)
SAPATAS (84x90)	0,464	0,84	0,90	0,61	2,12	=H*(L*2+C*2)
SAPATAS (84x90)	0,444	0,84	0,90	0,59	2,05	=H*(L*2+C*2)
SAPATAS (90x90)	0,480	0,90	0,90	0,59	2,12	=H*(L*2+C*2)
SAPATAS (60x60)	0,228	0,60	0,60	0,63	1,51	=H*(L*2+C*2)
SAPATAS (200x200)	2,172	2,00	2,00	0,54	4,32	=H*(L*2+C*2)
SAPATAS (60x60)	0,158	0,60	0,60	0,44	1,06	=H*(L*2+C*2)
TOTAL (TV)	32,215	m ³		TOTAL (TF)	131,71	m ²
				MÉDIA (TF/TV)	4,09	m ² /m ³