

OBRA: MUSEO CUEVA DE LAS MANOS

CÓDIGO -

Documento: DOC-101.1

Versión: v01

Referencia: ES-101-Fundaciones

PLANILLA DE DOBLADOS - BASES

Resumen - Cantidad de acero ADN-420 por diámetro								
ϕ	6	8	10	12	16	20	25	Total
kg		141.7	841.2	520.1	57.1			1560.04
+10%		155.9	925.3	572.1	62.8			1716.05

21/05/2014

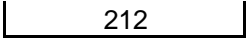
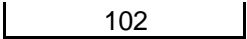
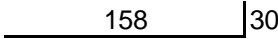
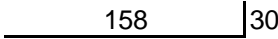
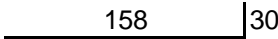
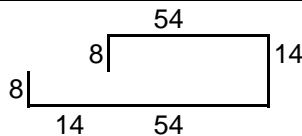
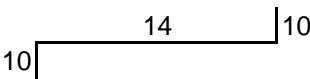
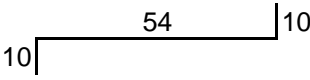
Vol. H° [m3]
66.85

Se indica el total para bases y fustes de columnas. No se incluyen vigas de encadenado o tensores.

Base: **C2**
 Tipo: EXCÉNTRICA My

N.F.: -1.00 m
 N.S.V.: -0.15 m

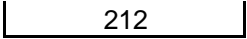
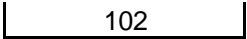
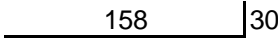
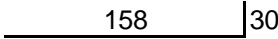
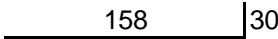
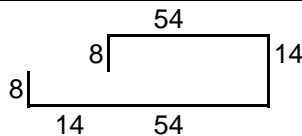
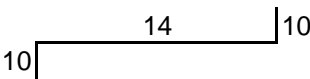
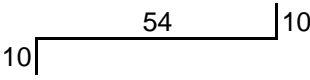
Dimensiones: [cm]	Base						Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy
	220	110	65	23	65	25	60	60	20
									1.16

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C2	1	$\phi 10$	15  15	4	242	968	6.0	Inf. X
	2	$\phi 10$	15  15	8	132	1056	6.6	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	6	188.2	1129.2	10.1	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$	 14	6	152	912	3.6	Estribo
	7	$\phi 8$	 10	9	34	306	1.2	Gancho Y
	8	$\phi 8$	 10	3	74	222	0.9	Gancho X
	9							
	10							
	11							
	12							

Base: **C3**
 Tipo: EXCÉNTRICA My

N.F.: -1.00 m
 N.S.V.: -0.15 m

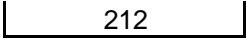
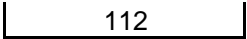
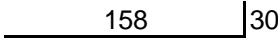
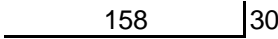
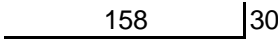
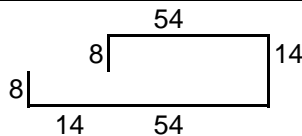
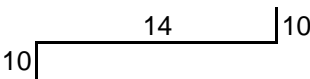
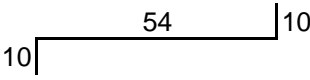
Dimensiones: [cm]	Base						Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy
	220	110	65	23	65	25	60	60	20

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C3	1	$\phi 10$	15  15	4	242	968	6.0	Inf. X
	2	$\phi 10$	15  15	8	132	1056	6.6	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	6	188.2	1129.2	10.1	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$		6	152	912	3.6	Estribo
	7	$\phi 8$	 10	9	34	306	1.2	Gancho Y
	8	$\phi 8$	 10	3	74	222	0.9	Gancho X
	9							
	10							
	11							
	12							

Base: **C6**
 Tipo: EXCÉNTRICA My

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones: [cm]	Base						Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy
	220	120	65	23	70	25	60	60	20

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C6	1	$\phi 10$	15  15	5	242	1210	7.5	Inf. X
	2	$\phi 10$	15  15	8	142	1136	7.0	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	6	188.2	1129.2	10.1	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$	 14	6	152	912	3.6	Estribo
	7	$\phi 8$	 10	9	34	306	1.2	Gancho Y
	8	$\phi 8$	 10	3	74	222	0.9	Gancho X
	9							
	10							
	11							
	12							

Base: **C7**

N.F.: -1.00 m

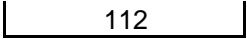
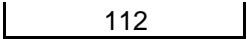
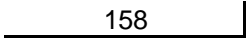
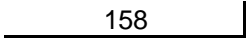
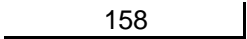
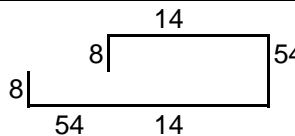
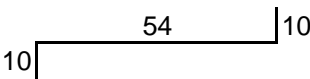
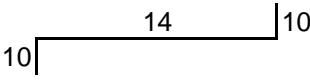
Tipo: DOBLE EXCÉNTRICA

N.S.V.: -0.15 m

Dimensiones:

[cm]

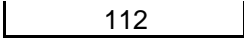
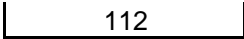
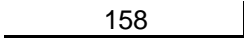
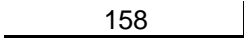
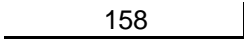
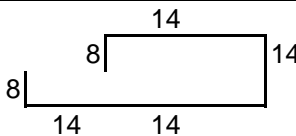
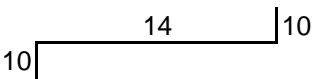
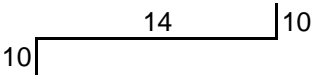
Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
120	120	25	65	90	25	40	20	60	0.54

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C7	1	$\phi 10$	15  15	5	142	710	4.4	Inf. X
	2	$\phi 10$	15  15	5	142	710	4.4	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	6	188.2	1129.2	10.1	Cara 2
	6	$\phi 8$	 54	6	152	912	3.6	Estribo
	7	$\phi 8$	 10	3	74	222	0.9	Gancho Y
	8	$\phi 8$	 10	9	34	306	1.2	Gancho X
	9							
	10							
	11							
	12							

Base: **C9**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

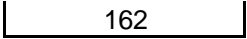
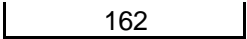
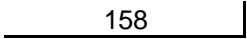
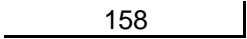
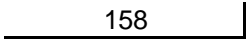
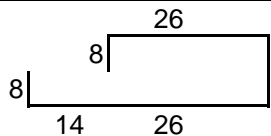
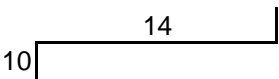
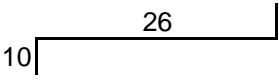
Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	120	120	25	25		25	30	20	20	0.42

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C9	1	$\phi 10$	15  15	5	142	710	4.4	Inf. X
	2	$\phi 10$	15  15	5	142	710	4.4	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$		6	72	432	1.7	Estribo
	7	$\phi 8$		3	34	102	0.4	Gancho Y
	8	$\phi 8$		3	34	102	0.4	Gancho X
	9							
	10							
	11							
	12							

Base: **C10**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

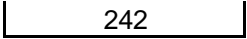
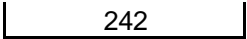
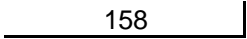
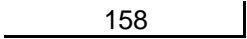
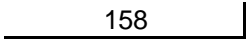
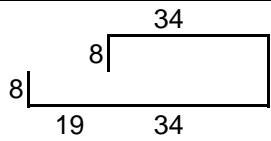
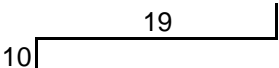
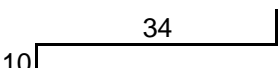
Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	170	170	37	25		25	50	32	20	1.05

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C10	1	$\phi 10$	15  15	6	192	1152	7.1	Inf. X
	2	$\phi 10$	15  15	7	192	1344	8.3	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$	 14	6	96	576	2.3	Estribo
	7	$\phi 8$	 10	3	34	102	0.4	Gancho Y
	8	$\phi 8$	 10	3	46	138	0.5	Gancho X
	9							
	10							
	11							
	12							

Base: **C11**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	250	250	45	30		25	60	40	25	2.45

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C11	1	$\phi 10$	15  15	15	272	4080	25.3	Inf. X
	2	$\phi 10$	15  15	18	272	4896	30.4	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	4	188.2	752.8	6.7	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$	 19	6	122	732	2.9	Estribo
	7	$\phi 8$	 10	6	39	234	0.9	Gancho Y
	8	$\phi 8$	 10	3	54	162	0.6	Gancho X
	9							
	10							
	11							
	12							

Base: **C12**

N.F.: -1.00 m

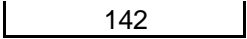
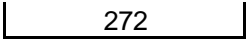
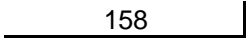
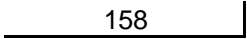
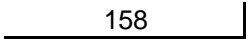
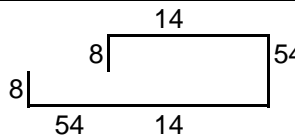
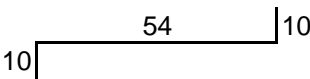
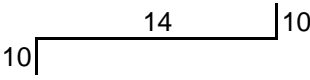
Tipo: EXCÉNTRICA Mx

N.S.V.: -0.15 m

Dimensiones:

[cm]

Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
150	280	23	65	85	25	80	20	60	2.38

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C12	1	$\phi 10$	15  15	10	172	1720	10.7	Inf. X
	2	$\phi 10$	15  15	7	302	2114	13.1	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	8	188.2	1505.6	13.5	Cara 2
	6	$\phi 8$		6	152	912	3.6	Estribo
	7	$\phi 8$		3	74	222	0.9	Gancho Y
	8	$\phi 8$		12	34	408	1.6	Gancho X
	9							
	10							
	11							
	12							

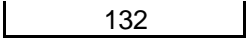
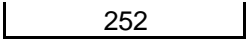
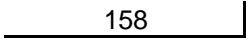
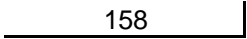
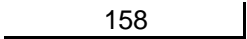
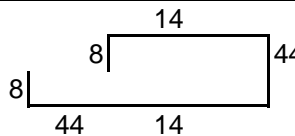
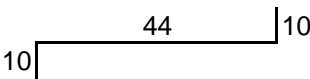
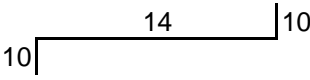
Base: **C13**
 Tipo: EXCÉNTRICA Mx

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones:

[cm]

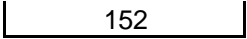
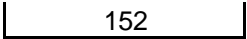
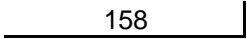
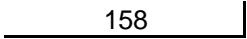
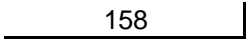
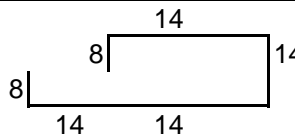
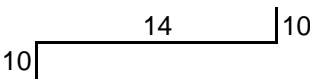
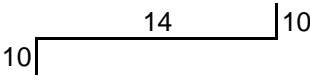
Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
140	260	23	55	80	25	80	20	50	2.03

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C13	1	$\phi 10$	15  15	9	162	1458	9.0	Inf. X
	2	$\phi 10$	15  15	6	282	1692	10.5	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	4	188.2	752.8	6.7	Cara 2
	6	$\phi 8$		6	132	792	3.1	Estribo
	7	$\phi 8$		3	64	192	0.8	Gancho Y
	8	$\phi 8$		6	34	204	0.8	Gancho X
	9							
	10							
	11							
	12							

Base: **C14**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	160	160	25	25		25	40	20	20	0.82

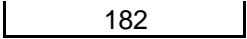
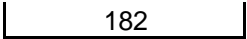
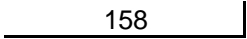
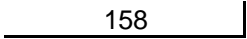
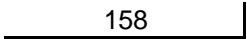
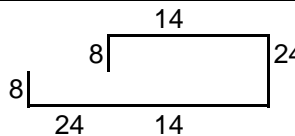
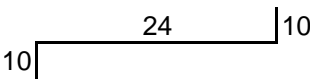
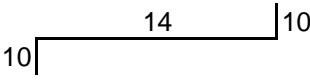
ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C14	1	$\phi 10$	15  15	6	182	1092	6.8	Inf. X
	2	$\phi 10$	15  15	6	182	1092	6.8	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$	 14	6	72	432	1.7	Estribo
	7	$\phi 8$	 10	3	34	102	0.4	Gancho Y
	8	$\phi 8$	 10	3	34	102	0.4	Gancho X
	9							
	10							
	11							
	12							

Base: **C15**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones:
 [cm]

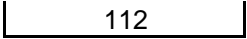
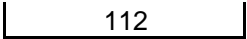
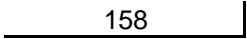
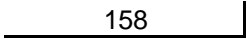
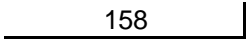
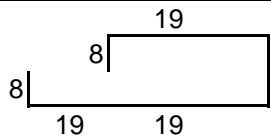
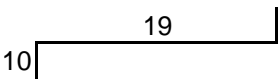
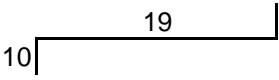
Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
190	190	25	35		25	50	20	30	1.29

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C15	1	$\phi 10$	15  15	9	212	1908	11.8	Inf. X
	2	$\phi 10$	15  15	8	212	1696	10.5	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$		6	92	552	2.2	Estribo
	7	$\phi 8$		3	44	132	0.5	Gancho Y
	8	$\phi 8$		3	34	102	0.4	Gancho X
	9							
	10							
	11							
	12							

Base: **C16**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

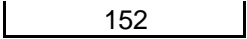
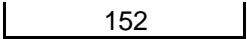
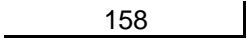
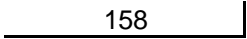
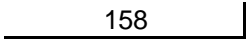
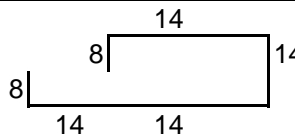
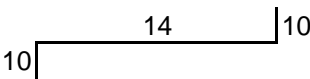
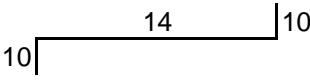
Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	120	120	30	30		25	30	25	25	0.44

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C16	1	$\phi 10$	15  15	5	142	710	4.4	Inf. X
	2	$\phi 10$	15  15	5	142	710	4.4	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$	 19	6	92	552	2.2	Estribo
	7	$\phi 8$	 10	3	39	117	0.5	Gancho Y
	8	$\phi 8$	 10	3	39	117	0.5	Gancho X
	9							
	10							
	11							
	12							

Base: **C18**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	160	160	25	25		25	40	20	20	0.82

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C18	1	$\phi 10$	15  15	7	182	1274	7.9	Inf. X
	2	$\phi 10$	15  15	7	182	1274	7.9	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$	 14	6	72	432	1.7	Estribo
	7	$\phi 8$	 10	3	34	102	0.4	Gancho Y
	8	$\phi 8$	 10	3	34	102	0.4	Gancho X
	9							
	10							
	11							
	12							

Base: **C19**

N.F.: -1.00 m

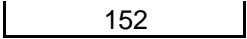
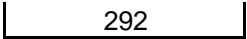
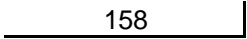
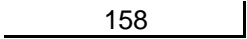
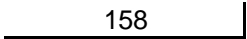
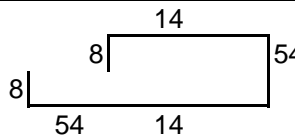
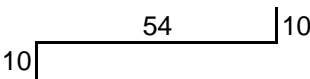
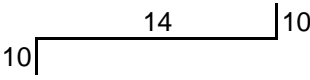
Tipo: EXCÉNTRICA Mx

N.S.V.: -0.15 m

Dimensiones:

[cm]

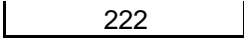
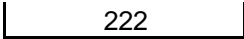
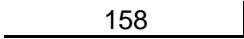
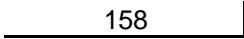
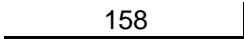
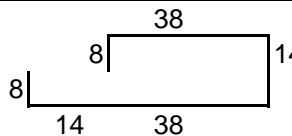
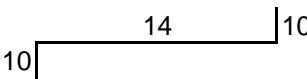
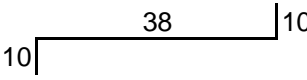
Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
160	300	23	65	90	25	90	20	60	2.94

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C19	1	$\phi 10$	15  15	11	182	2002	12.4	Inf. X
	2	$\phi 10$	15  15	8	322	2576	16.0	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	8	188.2	1505.6	13.5	Cara 2
	6	$\phi 8$		6	152	912	3.6	Estribo
	7	$\phi 8$	 10	3	74	222	0.9	Gancho Y
	8	$\phi 8$	 10	12	34	408	1.6	Gancho X
	9							
	10							
	11							
	12							

Base: **C20**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	230	230	49	25		25	60	44	20	2.08

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C20	1	$\phi 10$	15  15	11	252	2772	17.2	Inf. X
	2	$\phi 10$	15  15	14	252	3528	21.9	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	4	188.2	752.8	6.7	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$		6	120	720	2.9	Estribo
	7	$\phi 8$		6	34	204	0.8	Gancho Y
	8	$\phi 8$		3	58	174	0.7	Gancho X
	9							
	10							
	11							
	12							

Base: **C22**

N.F.: -1.00 m

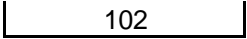
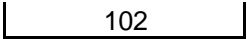
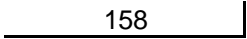
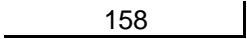
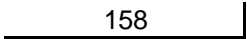
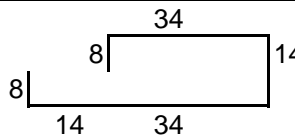
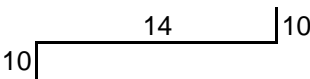
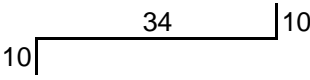
Tipo: DOBLE EXCÉNTRICA

N.S.V.: -0.15 m

Dimensiones:

[cm]

Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
110	110	45	25	75	25	40	40	20	0.44

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C22	1	$\phi 10$	15  15	4	132	528	3.3	Inf. X
	2	$\phi 10$	15  15	4	132	528	3.3	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	4	188.2	752.8	6.7	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$		6	112	672	2.7	Estribo
	7	$\phi 8$	 10	6	34	204	0.8	Gancho Y
	8	$\phi 8$	 10	3	54	162	0.6	Gancho X
	9							
	10							
	11							
	12							

Base: **C23**

N.F.: -1.00 m

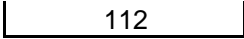
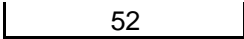
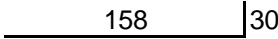
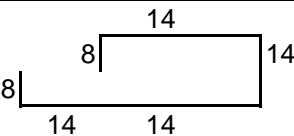
Tipo: EXCÉNTRICA My

N.S.V.: -0.15 m

Dimensiones:

[cm]

Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
120	60	25	28	40	25	40	20	20	0.27

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C23	1	$\phi 10$	15  15	4	142	568	3.5	Inf. X
	2	$\phi 10$	15  15	5	82	410	2.5	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4							
	5							
	6	$\phi 8$		6	72	432	1.7	Estribo
	7							
	8							
	9							
	10							
	11							
	12							

Base: **C24**

N.F.: -1.00 m

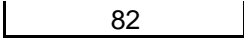
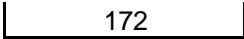
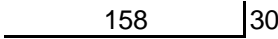
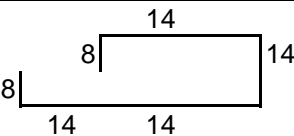
Tipo: EXCÉNTRICA Mx

N.S.V.: -0.15 m

Dimensiones:

[cm]

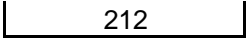
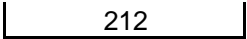
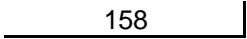
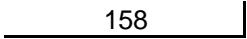
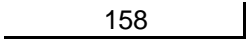
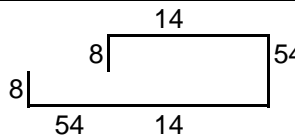
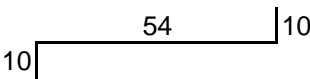
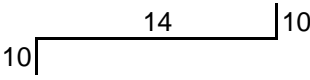
Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
90	180	28	25	55	25	60	20	20	0.71

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C24	1	$\phi 10$	15  15	7	112	784	4.9	Inf. X
	2	$\phi 10$	15  15	4	202	808	5.0	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4							
	5							
	6	$\phi 8$	 14	6	72	432	1.7	Estribo
	7							
	8							
	9							
	10							
	11							
	12							

Base: **C25**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	220	220	25	65		25	60	20	60	1.94

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C25	1	$\phi 10$	15  15	12	242	2904	18.0	Inf. X
	2	$\phi 10$	15  15	8	242	1936	12.0	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	8	188.2	1505.6	13.5	Cara 2
	6	$\phi 8$		6	152	912	3.6	Estribo
	7	$\phi 8$	 10	3	74	222	0.9	Gancho Y
	8	$\phi 8$	 10	12	34	408	1.6	Gancho X
	9							
	10							
	11							
	12							

Base: **C26**

N.F.: -1.00 m

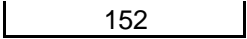
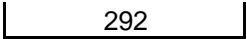
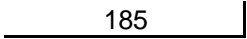
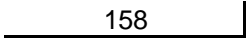
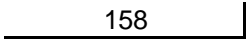
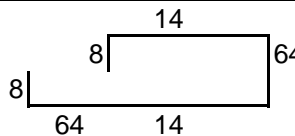
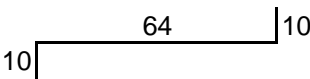
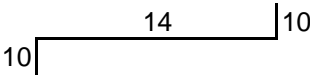
Tipo: EXCÉNTRICA Mx

N.S.V.: -0.15 m

Dimensiones:

[cm]

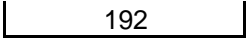
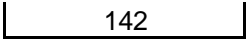
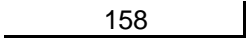
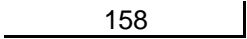
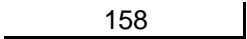
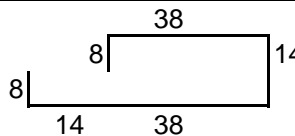
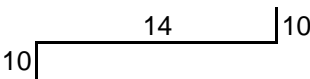
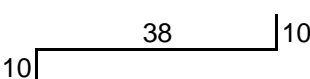
Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
160	300	23	75	90	25	80	20	70	2.75

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C26	1	$\phi 10$	15  15	11	182	2002	12.4	Inf. X
	2	$\phi 10$	15  15	9	322	2898	18.0	Inf. Y
	3	$\phi 16$	 40	4	224.6	898.4	14.3	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	8	188.2	1505.6	13.5	Cara 2
	6	$\phi 8$	 64	6	172	1032	4.1	Estribo
	7	$\phi 8$	 10	3	84	252	1.0	Gancho Y
	8	$\phi 8$	 10	12	34	408	1.6	Gancho X
	9							
	10							
	11							
	12							

Base: **C27**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

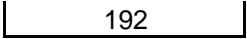
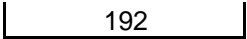
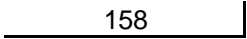
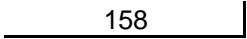
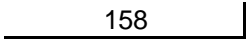
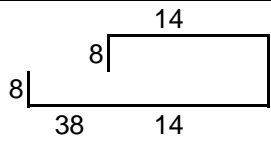
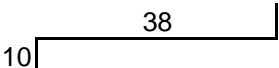
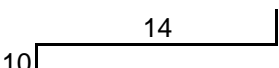
Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	200	150	49	25		25	50	44	20	1.10

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C27	1	$\phi 10$	15  15	6	222	1332	8.3	Inf. X
	2	$\phi 10$	15  15	7	172	1204	7.5	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	4	188.2	752.8	6.7	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$	 14	6	120	720	2.9	Estribo
	7	$\phi 8$	 10	6	34	204	0.8	Gancho Y
	8	$\phi 8$	 10	3	58	174	0.7	Gancho X
	9							
	10							
	11							
	12							

Base: **C28**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

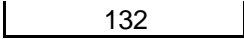
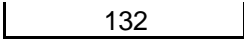
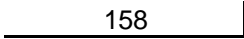
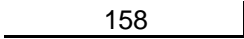
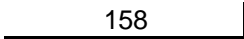
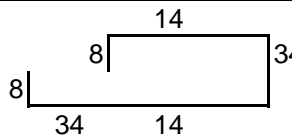
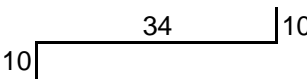
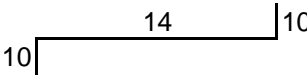
Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	200	200	25	49		25	50	20	44	1.44

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C28	1	$\phi 10$	15  15	11	222	2442	15.2	Inf. X
	2	$\phi 10$	15  15	9	222	1998	12.4	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	4	188.2	752.8	6.7	Cara 2
	6	$\phi 8$	 38	6	120	720	2.9	Estribo
	7	$\phi 8$	 10	3	58	174	0.7	Gancho Y
	8	$\phi 8$	 10	6	34	204	0.8	Gancho X
	9							
	10							
	11							
	12							

Base: **C29**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	140	140	25	45		25	40	20	40	0.67

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C29	1	$\phi 10$	15  15	5	162	810	5.0	Inf. X
	2	$\phi 10$	15  15	5	162	810	5.0	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	4	188.2	752.8	6.7	Cara 2
	6	$\phi 8$	 34	6	112	672	2.7	Estribo
	7	$\phi 8$	 10	3	54	162	0.6	Gancho Y
	8	$\phi 8$	 10	6	34	204	0.8	Gancho X
	9							
	10							
	11							
	12							

Base: **C30**

N.F.: -1.00 m

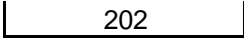
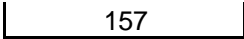
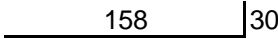
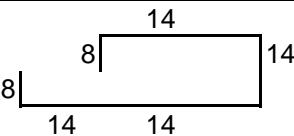
Tipo: DOBLE EXCÉNTRICA

N.S.V.: -0.15 m

Dimensiones:

[cm]

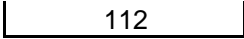
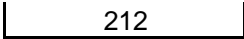
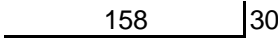
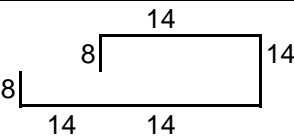
Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
210	165	25	25	115	25	70	20	20	1.47

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C30	1	$\phi 10$	15  15	7	232	1624	10.1	Inf. X
	2	$\phi 10$	15  15	8	187	1496	9.3	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4							
	5							
	6	$\phi 8$		6	72	432	1.7	Estribo
	7							
	8							
	9							
	10							
	11							
	12							

Base: **C31**
 Tipo: EXCÉNTRICA Mx

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones: [cm]	Base						Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy
	120	220	28	25	70	25	70	20	20
									1.24

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C31	1	$\phi 10$	15  15	8	142	1136	7.0	Inf. X
	2	$\phi 10$	15  15	6	242	1452	9.0	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4							
	5							
	6	$\phi 8$		6	72	432	1.7	Estribo
	7							
	8							
	9							
	10							
	11							
	12							

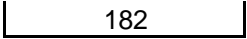
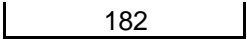
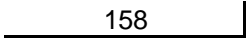
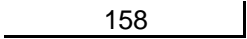
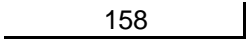
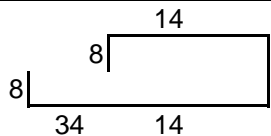
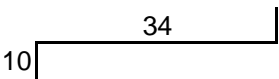
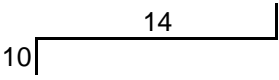
Base: **C32**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones:

[cm]

Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
190	190	25	45		25	50	20	40	1.31

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C32	1	$\phi 10$	15  15	10	212	2120	13.2	Inf. X
	2	$\phi 10$	15  15	7	212	1484	9.2	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	4	188.2	752.8	6.7	Cara 2
	6	$\phi 8$	 34	6	112	672	2.7	Estribo
	7	$\phi 8$	 10	3	54	162	0.6	Gancho Y
	8	$\phi 8$	 10	6	34	204	0.8	Gancho X
	9							
	10							
	11							
	12							

Base: **C33**

N.F.: -1.00 m

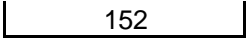
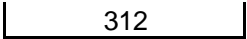
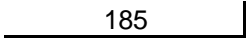
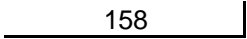
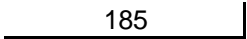
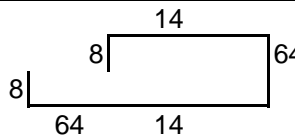
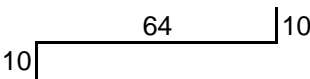
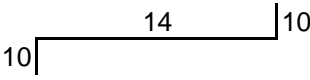
Tipo: EXCÉNTRICA Mx

N.S.V.: -0.15 m

Dimensiones:

[cm]

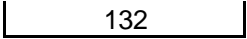
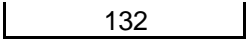
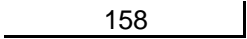
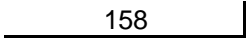
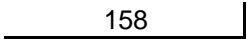
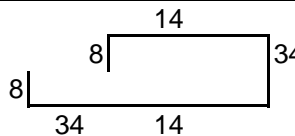
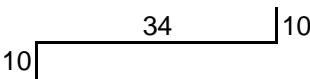
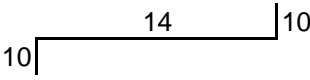
Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
160	320	23	75	90	25	90	20	70	3.18

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C33	1	$\phi 10$	15  15	11	182	2002	12.4	Inf. X
	2	$\phi 10$	15  15	9	342	3078	19.1	Inf. Y
	3	$\phi 16$	 40	4	224.6	898.4	14.3	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 16$	 40	8	224.6	1796.8	28.5	Cara 2
	6	$\phi 8$	 64	6	172	1032	4.1	Estribo
	7	$\phi 8$	 10	3	84	252	1.0	Gancho Y
	8	$\phi 8$	 10	12	34	408	1.6	Gancho X
	9							
	10							
	11							
	12							

Base: **C34**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	140	140	25	45		25	40	20	40	0.67

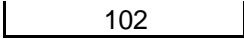
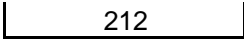
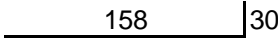
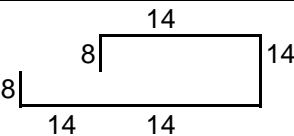
ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C34	1	$\phi 10$	15  15	5	162	810	5.0	Inf. X
	2	$\phi 10$	15  15	5	162	810	5.0	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	4	188.2	752.8	6.7	Cara 2
	6	$\phi 8$	 34	6	112	672	2.7	Estribo
	7	$\phi 8$	 10	3	54	162	0.6	Gancho Y
	8	$\phi 8$	 10	6	34	204	0.8	Gancho X
	9							
	10							
	11							
	12							

Base: **C35**
 Tipo: EXCÉNTRICA Mx

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones:
 [cm]

Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
110	220	23	25	65	25	70	20	20	1.14

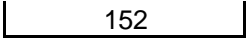
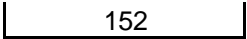
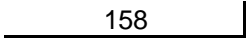
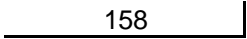
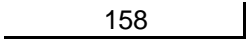
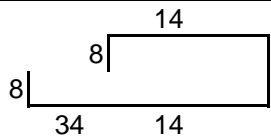
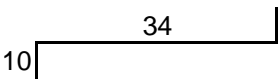
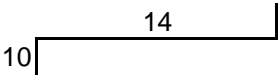
ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C35	1	$\phi 10$	15  15	8	132	1056	6.6	Inf. X
	2	$\phi 10$	15  15	6	242	1452	9.0	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4							
	5							
	6	$\phi 8$		6	72	432	1.7	Estribo
	7							
	8							
	9							
	10							
	11							
	12							

Base: **C36**
 Tipo: CENTRADA

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones:
 [cm]

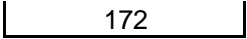
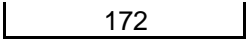
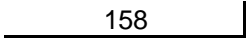
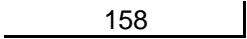
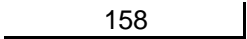
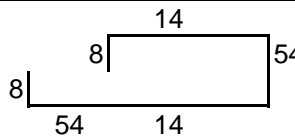
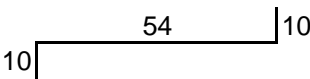
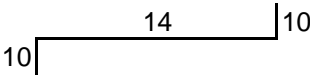
Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
160	160	25	45		25	40	20	40	0.85

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C36	1	$\phi 10$	15  15	8	182	1456	9.0	Inf. X
	2	$\phi 10$	15  15	6	182	1092	6.8	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	4	188.2	752.8	6.7	Cara 2
	6	$\phi 8$	 34	6	112	672	2.7	Estribo
	7	$\phi 8$	 10	3	54	162	0.6	Gancho Y
	8	$\phi 8$	 10	6	34	204	0.8	Gancho X
	9							
	10							
	11							
	12							

Base: **C37**
 Tipo: EXCÉNTRICA Mx

N.F.: -1.00 m
 N.S.V.: -0.15 m

Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	180	180	23	65	100	25	60	20	60	1.59

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
C37	1	$\phi 10$	15  15	7	202	1414	8.8	Inf. X
	2	$\phi 10$	15  15	7	202	1414	8.8	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 1
	5	$\phi 12$	 30	8	188.2	1505.6	13.5	Cara 2
	6	$\phi 8$		6	152	912	3.6	Estribo
	7	$\phi 8$		3	74	222	0.9	Gancho Y
	8	$\phi 8$		12	34	408	1.6	Gancho X
	9							
	10							
	11							
	12							

Base: **C41**

N.F.: -2.00 m

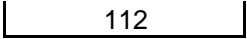
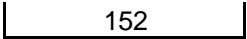
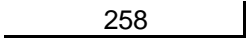
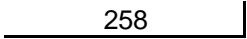
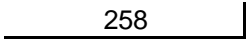
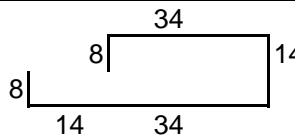
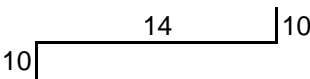
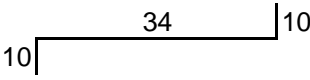
Tipo: EXCÉNTRICA Mx

N.S.V.: -0.15 m

Dimensiones:

[cm]

Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
120	160	43	25	80	25	50	40	20	0.87

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C41	1	$\phi 10$	15  15	6	142	852	5.3	Inf. X
	2	$\phi 10$	15  15	5	182	910	5.6	Inf. Y
	3	$\phi 12$	 30	4	288.2	1152.8	10.3	Esquina
	4	$\phi 12$	 30	4	288.2	1152.8	10.3	Cara 1
	5	$\phi 12$	 30	2	288.2	576.4	5.1	Cara 2
	6	$\phi 8$	 14	12	112	1344	5.3	Estribo
	7	$\phi 8$	 10	12	34	408	1.6	Gancho Y
	8	$\phi 8$	 10	6	54	324	1.3	Gancho X
	9							
	10							
	11							
	12							

Base: **C42**

N.F.: -1.00 m

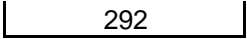

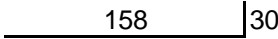
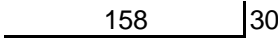
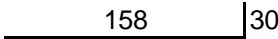
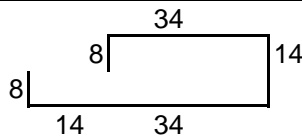
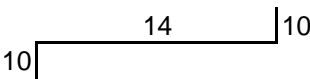
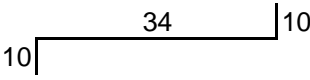
Tipo: EXCÉNTRICA My

N.S.V.: -0.15 m

Dimensiones:

[cm]

Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
300	75	45	23	48	25	90	40	20	1.31

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
C42	1	$\phi 10$	15  15	5	322	1610	10.0	Inf. X
	2	$\phi 10$	15  15	11	97	1067	6.6	Inf. Y
	3	$\phi 12$	 30	4	188.2	752.8	6.7	Esquina
	4	$\phi 12$	 30	4	188.2	752.8	6.7	Cara 1
	5	$\phi 12$	 30	2	188.2	376.4	3.4	Cara 2
	6	$\phi 8$	 14	6	112	672	2.7	Estribo
	7	$\phi 8$	 10	6	34	204	0.8	Gancho Y
	8	$\phi 8$	 10	3	54	162	0.6	Gancho X
	9							
	10							
	11							
	12							

Base: **CO_3**

N.F.: -1.00 m

Tipo: DOBLE EXCÉNTRICA

N.S.V.: -0.15 m

Dimensiones:

[cm]

Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
240	240	90	153		50	50	90	153	3.00

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
CO_3	1	$\phi 10$	15 232 15	10	262	2620	16.3	Inf. X
	2	$\phi 10$	15 232 15	9	262	2358	14.6	Inf. Y
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							

Base: **CO_3.2**

N.F.: -1.00 m

Tipo: DOBLE EXCÉNTRICA

N.S.V.: -0.15 m

Dimensiones:

[cm]

Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
250	250	153	90		50	50	153	90	3.24

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
CO_3.2	1	$\phi 10$	15 242 15	9	272	2448	15.2	Inf. X
	2	$\phi 10$	15 242 15	13	272	3536	21.9	Inf. Y
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							

Base: **CO_2**

N.F.: -1.00 m

Tipo: EXCÉNTRICA My

N.S.V.: -0.15 m

Dimensiones:

[cm]

Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
320	160	223	20		40	40	223	20	2.14

ELEMENTO	Pos	ϕ	DETALLE	Cant	LONG. [cm]		Peso	OBS
		mm		Total	Unit	Total	[kg]	
CO_2	1	$\phi 10$	15 312 15	6	342	2052	12.7	Inf. X
	2	$\phi 10$	15 152 15	13	182	2366	14.7	Inf. Y
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							

Base: **CO_8**
 Tipo: CENTRADA

N.F.: -2.00 m
 N.S.V.: -0.15 m

Dimensiones: [cm]	Base							Columna		Vol
	ax	ay	bx	by	b3	a3	h	dx	dy	m3
	400	400	411	202		80	80	411	202	12.85

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
CO_8	1	$\phi 10$	15 392 15	17	422	7174	44.5	Inf. X
	2	$\phi 10$	15 392 15	26	422	10972	68.1	Inf. Y
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							

Base: **CO_2**

N.F.: -1.00 m

Tipo: EXCÉNTRICA My

N.S.V.: -0.15 m

Dimensiones:

[cm]

Base							Columna		Vol
ax	ay	bx	by	b3	a3	h	dx	dy	m3
306	140	266	20		40	40	266	20	1.82

ELEMENTO	Pos	ϕ	DETALLE	Cant Total	LONG. [cm]		Peso [kg]	OBS
		mm			Unit	Total		
CO_2	1	$\phi 10$	15 298 15	5	328	1640	10.2	Inf. X
	2	$\phi 10$	15 132 15	11	162	1782	11.1	Inf. Y
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							