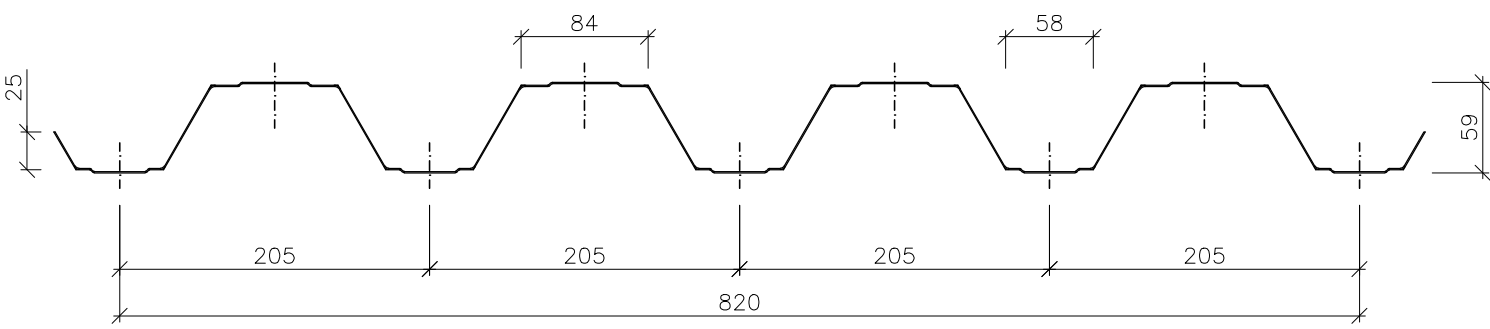


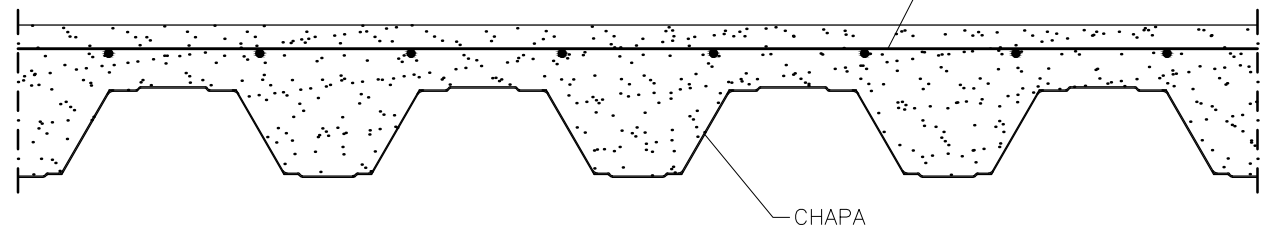
CHAPA COLABORANTE HAIRCOL 59 (EUROPERFIL)



CARACTERÍSTICAS MECÁNICAS DEL EUROPERFIL HAIRCOL 59 - HAIRONVILLE

e	β	S	I	W	LÍMITE ELÁSTICO
mm		cm ³ /m	cm ⁴ /m	cm ³ /m	MPa
1.0	0.12	13.45	74.56	23.02	326

DETALLE DE FORJADO S/E



FORJADO CARACTERÍSTICAS FORJADO COMPUESTO

TIPO CHAPA= HAIRCOL 59
 ESPESOR= 1mm
 CAPA COMPRESION= 40mm
 MALLAZO= 20x30x5-5
 Q.T.= 7.95 KN/m²



MADERA		
TIPO= LAMINADA CLASE GL24h		
PROPIEDADES ASOCIADAS A CLASE RESISTENTE		
RESISTENCIA N/mm ²	RIGIDEZ KN/mm ²	DENSIDAD Kg/m ³
FLEXION= 24	MÓDULO DE ELASTICIDAD II MEDIO=11.6	DESIDAD CARACTERÍSTICA=380
TRACCIÓN II = 16,5	MÓDULO DE ELASTICIDAD I MEDIO=0,39	
TRACCIÓN I = 0,4	MÓDULO TRANSVERSAL MEDIO=0,72	
COMPRESION II = 2,4		
COMPRESION I = 2,7		
CORTANTE= 2,7		
MATERIALES UNIONES		
CARTELAS= S 275 JR		
PERNOS CALIDAD= A 4 t		
CARGAS		
CUBRICION VIDRIO		
CONCARGAS		
VIDRIO 12mm	0,35 KN/m ²	SOBRECARGA
TOTAL	0,35 KN/m ²	USO/NEVE 1,00 KN/m ²
		TOTAL 1,00 KN/m ²
Q1 = 1,35 KN/m ²		
CARGAS		
CIERRE DE HUECO		
TIPO CHAPA= HAIRCOL 59		
ESPESOR= 1mm		
CAPA COMPRESION= 40mm		
MALLAZO= 20x30x5-5		
Q1 = 7,95 KN/m ²		

CUADRO DE CARACTERÍSTICAS DEL ACERO SEGÚN CÓDIGO TÉCNICO DE LA EDIFICACION											
CARACTERÍSTICAS MECÁNICAS MÍNIMAS DE LOS ACEROS LAMINADOS UNE EN 10025											
DESIGNACION	LÍMITE ELÁSTICO f _y (N/mm ²)	RESISTENCIA A LA RUTURA f _t (N/mm ²)	RESISTENCIA A LA TRACCIÓN f _t (N/mm ²)	MÓDULO ELÁSTICO E (N/mm ²)	COEFICIENTE DE ELONGACION ε _k	DENSIDAD ρ (kg/m ³)	COEFICIENTE DE DILATACION α	RESISTENCIA A LA TRACCIÓN f _t (N/mm ²)	RESISTENCIA A LA TRACCIÓN f _t (N/mm ²)	RESISTENCIA A LA TRACCIÓN f _t (N/mm ²)	RESISTENCIA A LA TRACCIÓN f _t (N/mm ²)
S 275 JR	275	475	510	210000	0,22	7850	12,0	12,0	12,0	12,0	12,0
COEFICIENTES PARCIALES DE SEGURIDAD (γ) PARA LAS ACCIONES											
VERIFICACION RESISTENCIA	ACCION PERMANENTE	ACCION VARIABLE	ACCION VARIABLE (Q)	ACCION VARIABLE (Q)	ACCION VARIABLE (Q)	ACCION VARIABLE (Q)	ACCION VARIABLE (Q)	ACCION VARIABLE (Q)	ACCION VARIABLE (Q)	ACCION VARIABLE (Q)	ACCION VARIABLE (Q)
	1,05	1,50	1,35	1,35	1,35	1,35	1,35	1,35	1,35	1,35	1,35
VALORES LÍMITES DE LA GARGANTA DE UNA SOLDADURA EN ÁNGULO EN UNA UNIÓN DE FUERZA											
ESPESOR DE LA PIEZA EN mm.	VALOR MÁXIMO (mm)	VALOR MÍNIMO (mm)	ESPESOR DE LA PIEZA EN mm.	VALOR MÁXIMO (mm)	VALOR MÍNIMO (mm)						
4,0 - 4,9	3,0	2,5	13,0 - 14,1	16,5	3,0						
5,0 - 5,9	3,0	2,5	15,0 - 16,9	16,5	3,0						
6,0 - 6,9	4,0	3,0	17,0 - 18,9	16,5	3,0						
7,0 - 7,9	4,0	3,0	19,0 - 20,9	16,5	3,0						
8,0 - 8,9	4,0	3,0	21,0 - 22,9	16,5	3,0						
9,0 - 9,9	4,0	3,0	23,0 - 24,9	16,5	3,0						
10,0 - 10,9	4,0	3,0	25,0 - 26,9	16,5	3,0						
11,0 - 11,9	4,0	3,0	27,0 - 28,9	16,5	3,0						
12,0 - 12,9	4,0	3,0	29,0 - 30,9	16,5	3,0						
13,0 - 13,9	4,0	3,0	31,0 - 32,9	16,5	3,0						
14,0 - 14,9	4,0	3,0	33,0 - 34,9	16,5	3,0						
15,0 - 15,9	4,0	3,0	35,0 - 36,9	16,5	3,0						
16,0 - 16,9	4,0	3,0	37,0 - 38,9	16,5	3,0						
17,0 - 17,9	4,0	3,0	39,0 - 40,9	16,5	3,0						
18,0 - 18,9	4,0	3,0	41,0 - 42,9	16,5	3,0						
19,0 - 19,9	4,0	3,0	43,0 - 44,9	16,5	3,0						
20,0 - 20,9	4,0	3,0	45,0 - 46,9	16,5	3,0						
21,0 - 21,9	4,0	3,0	47,0 - 48,9	16,5	3,0						
22,0 - 22,9	4,0	3,0	49,0 - 50,9	16,5	3,0						
23,0 - 23,9	4,0	3,0	51,0 - 52,9	16,5	3,0						
24,0 - 24,9	4,0	3,0	53,0 - 54,9	16,5	3,0						
25,0 - 25,9	4,0	3,0	55,0 - 56,9	16,5	3,0						
26,0 - 26,9	4,0	3,0	57,0 - 58,9	16,5	3,0						
27,0 - 27,9	4,0	3,0	59,0 - 60,9	16,5	3,0						
28,0 - 28,9	4,0	3,0	61,0 - 62,9	16,5	3,0						
29,0 - 29,9	4,0	3,0	63,0 - 64,9	16,5	3,0						
30,0 - 30,9	4,0	3,0	65,0 - 66,9	16,5	3,0						
31,0 - 31,9	4,0	3,0	67,0 - 68,9	16,5	3,0						
32,0 - 32,9	4,0	3,0	69,0 - 70,9	16,5	3,0						
33,0 - 33,9	4,0	3,0	71,0 - 72,9	16,5	3,0						
34,0 - 34,9	4,0	3,0	73,0 - 74,9	16,5	3,0						
35,0 - 35,9	4,0	3,0	75,0 - 76,9	16,5	3,0						
36,0 - 36,9	4,0	3,0	77,0 - 78,9	16,5	3,0						
37,0 - 37,9	4,0	3,0	79,0 - 80,9	16,5	3,0						
38,0 - 38,9	4,0	3,0	81,0 - 82,9	16,5	3,0						
39,0 - 39,9	4,0	3,0	83,0 - 84,9	16,5	3,0						
40,0 - 40,9	4,0	3,0	85,0 - 86,9	16,5	3,0						
41,0 - 41,9	4,0	3,0	87,0 - 88,9	16,5	3,0						
42,0 - 42,9	4,0	3,0	89,0 - 90,9	16,5	3,0						
43,0 - 43,9	4,0	3,0	91,0 - 92,9	16,5	3,0						
44,0 - 44,9	4,0	3,0	93,0 - 94,9	16,5	3,0						
45,0 - 45,9	4,0	3,0	95,0 - 96,9	16,5	3,0						
46,0 - 46,9	4,0	3,0	97,0 - 98,9	16,5	3,0						
47,0 - 47,9	4,0	3,0	99,0 - 100,9	16,5	3,0						
48,0 - 48,9	4,0	3,0	101,0 - 102,9	16,5	3,0						
49,0 - 49,9	4,0	3,0	103,0 - 104,9	16,5	3,0						
50,0 - 50,9	4,0	3,0	105,0 - 106,9	16,5	3,0						
51,0 - 51,9	4,0	3,0	107,0 - 108,9	16,5	3,0						
52,0 - 52,9	4,0	3,0	109,0 - 110,9	16,5	3,0						
53,0 - 53,9	4,0	3,0	111,0 - 112,9	16,5	3,0						
54,0 - 54,9	4,0	3,0	113,0 - 114,9	16,5	3,0						
55,0 - 55,9	4,0	3,0	115,0 - 116,9	16,5	3,0						
56,0 - 56,9	4,0	3,0	117,0 - 118,9	16,5	3,0						
57,0 - 57,9	4,0	3,0	119,0 - 120,9	16,5	3,0						
58,0 - 58,9	4,0	3,0	121,0 - 122,9	16,5	3,0						
59,0 - 59,9	4,0	3,0	123,0 - 124,9	16,5	3,0						
60,0 - 60,9	4,0	3,0	125,0 - 126,9	16,5	3,0						
61,0 - 61,9	4,0	3,0	127,0 - 128,9	16,5	3,0						
62,0 - 62,9	4,0	3,0	129,0 - 130,9	16,5	3,0						
63,0 - 63,9	4,0	3,0	131,0 - 132,9	16,5	3,0						
64,0 - 64,9	4,0	3,0	133,0 - 134,9	16,5	3,0						
65,0 - 65,9	4,0	3,0	135,0 - 136,9	16,5	3,0						
66,0 - 66,9	4,0	3,0	137,0 - 138,9	16,5	3,0						
67,0 - 67,9	4,0	3,0	139,0 - 140,9	16,5	3,0						
68,0 - 68,9	4,0	3,0	141,0 - 142,9	16,5	3,0						
69,0 - 69,9	4,0	3,0	143,0 - 144,9	16,5	3,0						
70,0 - 70,9	4,0	3,0	145,0 - 146,9	16,5	3,0						
71,0 - 71,9	4,0	3,0	147,0 - 148,9	16,5	3,0						
72,0 - 72,9	4,0	3,0	149,0 - 150,9	16,5	3,0						
73,0 - 73,9	4,0	3,0	151,0 - 152,9	16,5	3,0						
74,0 - 74,9	4,0	3,0	153,0 - 154,9	16,5	3,0						
75,0 - 75,9	4,0	3,0	155,0 - 156,9	16,5	3,0						
76,0 - 76,9	4,0	3,0	157,0 - 158,9	16,5	3,0						
77,0 - 77,9	4,0	3,0	159,0 - 160,9	16,5	3,0						
78,0 - 78,9	4,0	3,0	161,0 - 162,9	16,5	3,0						
79,0 - 79,9	4,0	3,0	163,0 - 164,9	16,5	3,0						
80,0 - 80,9	4,0	3,0	165,0 - 166,9	16,5	3,0						
81,0 - 81,9	4,0	3,0	167,0 - 168,9	16,5	3,0						
82,0 - 82,9	4,0	3,0	169,0 - 170,9	16,5	3,0						
83,0 - 83,9	4,0	3,0	171,0 - 172,9	16,5	3,0						
84,0 - 84,9	4,0	3,0	173,0 - 174,9	16,5	3,0						
85,0 - 85,9	4,0	3,0	175,0 - 176,9	16,5	3,0						
86,0 - 86,9	4,0	3,0	177,0 - 178,9	16,5	3,0						
87,0 - 87,9	4,0	3,0	179,0 - 180,9	16,5	3,0						
88,0 - 88,9	4,0	3,0	181,0 - 182,9	16,5	3,0						
89,0 - 89,9	4,0	3,0	183,0 - 184,9	16,5	3,0						
90,0 - 90,9	4,0	3,0	185,0 - 186,9	16,5	3,0						
91,0 - 91,9	4,0	3,0	187,0 - 188,9	16,5	3,0						
92,0 - 92,9	4,0	3,0	189,0 - 190,9	16,5	3,0						
93,0 - 93,9	4,0	3,0	191,0 - 192,9	16,5	3,0						
94,0 - 94,9	4,0	3,0	193,0 - 194,9	16,5	3,0						
95,0 - 95,9	4,0	3,0	195,0 - 196,9	16,5	3,0						
96,0 - 96,9	4,0	3,0	197,0 - 198,9	16,5	3,0						
97,0 - 97,9	4,0	3,0	199,0 - 200,9	16,5	3,0						
98,0 - 98,9	4,0	3,0	201,0 - 202,9	16,5	3,0						
99,0 - 99,9	4,0	3,0	203,0 - 204,9	16,5	3,0						
100,0 - 100,9	4,0	3,0	205,0 - 206,9	16,5	3,0						
101,0 - 101,9	4,0	3,0	207,0 - 208,9	16,5	3,0						
102,0 - 102,9	4,0	3,0	209,0 - 210,9	16,5	3,0						
103,0 - 103,9	4,0	3,0	211,0 - 212,9	16,5	3,0						
104,0 - 104,9	4,0	3,0	213,0 - 214,9	16,5	3,0						
105,0 - 105,9	4,0	3,0	215,0 - 216,9	16,5	3,0						
106,0 - 106,9	4,0	3,0	217,0 - 218,9	16,5	3,0						
107,0 - 107,9	4,0	3,0	219,0 - 220,9	16,5	3,0						
108,0 - 108,9	4,0	3,0	221,0 - 222,9	16,5	3,0						
109,0 - 109,9	4,0	3,0	223,0 - 224,9	16,5	3,0						
110,0 - 110,9	4,0	3,0	225,0 - 226,9	16,5	3,0						
111,0 - 111,9	4,0	3,0	227,0 - 228,9	16,5	3,0						
112,0 - 112,9	4,0	3,0	229,0 - 230,9	16,5	3,0						
113,0 - 113,9	4,0	3,0	231,0 - 232,9	16,5	3,0						
114,0 - 114,9	4,0	3,0	233,0 - 234,9	16,5	3,0						
115,0 - 115,9	4,0	3,0	235,0 - 236,9	16,5	3,0						
116,0 - 116,9	4,0	3,0	237,0 - 238,9	16,5	3,0						
117,0 - 117,9	4,0	3,0	239,0 - 240,9	16,5	3,0						
118,0 - 118,9	4,0	3,0	241,0 - 242,9	16,5	3,0						
119,0 - 119,9	4,0	3,0	243,0 - 244,9	16,5	3,0						
120,0 - 120,9	4,0	3,0	245,0 - 246,9	16,5	3,0						
121,0 - 121,9	4,0	3,0	247,0 - 248,9	16,5	3,0						
122,0 - 122,9	4,0	3,0	249,0 - 250,9	16,5	3,0						
123,0 - 123,9	4,0	3,0	251,0 - 252,9	16,5	3,0						
124,0 - 124,9	4,0	3,0	253,0 - 254,9	16,5	3,0						
125,0 - 125,9	4,0	3,0	255,0 - 256,9	16,5	3,0						
126,0 - 126,9	4,0	3,0	257,0 - 258,9	16,5	3,0						
127,0 - 127,9	4,0	3,0	259,0 - 260,9	16,5	3,0						
128,0 - 128,9											