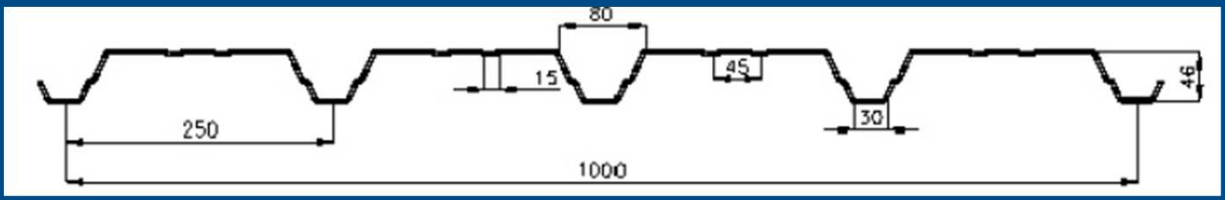

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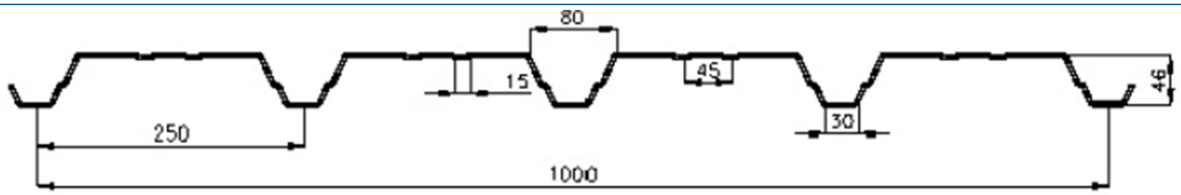
PROFILE



*Calculations carried out by the department of construction and architectural technologies of the Polytechnic University of Madrid.

Description

Profile 46 is an ideal solution for all types of façades, deck roofs, and enclosures.

Applications

- Deck roofing
- Lost formwork

Mechanical properties

- Steel quality
- Elastic limit > 250 N/mm2
- Modulus of elasticity E=210,000 N/mm2
- Breaking limit = 330 N/mm2
- Base material S220GD

Geometric features

Espesor	0,60	0,70	0,75	0,80	1,00	1,20	mm
Área sección	778	907	972	1037	1296	1555	mm2
Peso perfil	5,8	6,76	7,25	7,73	9,66	11,6	kg/m2
Peso instalado	6,1	7,12	7,63	8,14	10,17	12,21	kg/m2
Inercia Bruta	216462	252551	270597	288645	360853	433093	mm4/m
Ix(+,ef)	188172	204708	225568	273036	350860	429624	mm4/m
Wx(+,ef)	6349	6710	7287	8396	10565	12730	mm3/m
Ix(-,ef)	200810	243000	264429	285972	360853	433093	mm4/m
Wx(-,ef)	5860	7143	7799	8458	10667	12764	mm3/m

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Admissible overloads – One span (two supports)

CARGA DESCENDENTE ADMISIBLE (kg/m2) PARA FLECHA L/200						
luz (m)	0.6mm	0.7mm	0.75mm	0.8mm	1.0mm	1.2mm
1,00	554	724	817	914	1356	1720
1,25	398	519	561	648	797	953
1,50	336	359	389	449	567	683
1,75	252	266	288	332	418	504
2,00	193	204	221	256	321	387
2,25	136	148	163	197	253	307
2,50	99	108	118	144	185	226
2.75	74	81	89	108	139	170
3.00	57	62	68	84	107	130
3.25	45	49	54	65	84	103
3.50			43	52	67	83
3.75				43	55	67
4.00					45	55

Admissible overloads – Two spans (three supports)

CARGA DESCENDENTE ADMISIBLE (kg/m2) PARA FLECHA L/200						
luz (m)	0.6mm	0.7mm	0.75mm	0.8mm	1.0mm	1.2mm
1,00	554	724	817	914	1356	1720
1,25	398	519	561	648	854	1214
1,50	336	386	440	492	752	1012
1,75	257	343	388	435	618	733
2,00	231	304	333	377	469	565
2,25	208	241	261	296	372	448
2,50	178	195	212	241	303	364
2.75	147	161	175	199	251	301
3.00	123	136	148	167	211	253
3.25	105	116	126	143	179	216
3.50	90	100	109	123	155	187
3.75	73	84	92	105	134	162
4.00	60	69	75	87	110	134

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Admissible overloads – Three spans (four supports)

CARGA DESCENDENTE ADMISIBLE (kg/m2) PARA FLECHA L/200						
luz (m)	0.6mm	0.7mm	0.75mm	0.8mm	1.0mm	1.2mm
1,00	554	724	817	914	1356	1874
1,25	398	519	585	655	969	1339
1,50	336	440	496	556	823	1136
1,75	290	378	426	477	705	975
2,00	254	331	373	418	619	779
2,25	225	295	332	372	515	615
2,50	203	266	299	333	416	499
2.75	185	225	245	273	345	413
3.00	168	189	206	230	290	348
3.25	142	161	175	196	247	297
3.50	122	140	152	169	213	256
3.75	107	121	133	148	187	223
4.00	94	107	116	129	164	197

Legend for calculation

- ELU: Maximum load = 1.35 * Own weight + 1.50 * Use overload
- ELS: Maximum load = 1.00 * Own weight + 1.00 * Use overload – Maximum deflection < L/200
- Calculations carried out by the department of construction and architectural technology of the Polytechnic University of Madrid

Applicable regulations

- Eurocode -3: Metal structures project
- UNE-ENV 1993-1-1: General rules and building rules
- NBE-EA-95-Part 4: Calculation of formed steel sheet pieces in buildings.