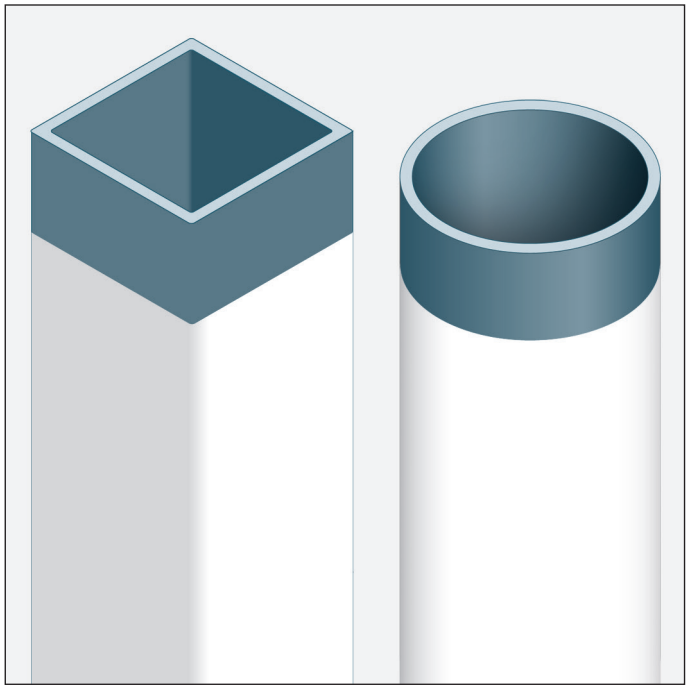
ELEMENTI IN ACCIAIO “CHIUSI”



RESISTENZA AL FUOCO: R15-60

PER MASSIVITÀ FINO A 320 (m^{-1})

- **Supporto:** pilastri o travi in acciaio “chiusi” (tubolari) tondi o quadri
- **Rivestimento protettivo:** pittura intumescente F62 PAINT S in funzione della massività (Assesment Report PAR/17254/01)
- **Applicazione:** a pennello, a rullo o a spruzzo
- **Resa:** 1 kg/m^2 pari a 497 µ
- **Preparazione del fondo:** ove non presente, utilizzare primer anticorrosivo F62 PRIMER S. Nel caso di strutture zincate utilizzate F62 PRIMER Z spessore 45-60 µ
- **Finitura:** utilizzare smalto F62 FINISH S, non previsto ai fini antincendio, per protezione dagli agenti atmosferici con uno spessore 60-95 µ

Assesment Report PAR/17254/01
Norma di prova: EN 13381-8

DESCRIZIONE DI CAPITOLATO

Fornitura e posa in opera di protezione di pilastri o travi chiusi (tubolari) tondi o quadri in acciaio con resistenza al fuoco R15/30/60 realizzata con vernice intumescente antincendio in dispersione acquosa F62 PAINT S in conformità all’Assesment Report PAR/17254/01 e secondo norma EN 13381-8.
La vernice sarà applicata a rullo, a pennello o a spruzzo.
Per le modalità di applicazione si veda apposita scheda tecnica.

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PROFILI CHIUSI

Elementi in acciaio tubolari "chiusi" (quadri o tondi)
Spessore minimo (in micron) di F62 PAINT S
in funzione della temperatura critica $\theta_{a,cr}$



TEMP. CRITICA $\theta_{a,cr}$ 350°C

Fattore di sezione	Classificazione di resist. al fuoco		
(m^{-1})	R15	R30	R60
75	273	647	–
80	273	698	–
85	273	749	–
90	273	800	–
95	273	828	–
100	273	857	–
110	273	914	–
120	273	970	–
130	289	1027	–
140	311	1084	–
150	333	1141	–
160	355	1198	–
170	376	1255	–
180	398	1315	–
190	420	–	–
200	442	–	–
210	464	–	–
220	486	–	–
230	507	–	–
240	529	–	–
250	551	–	–
260	573	–	–
270	595	–	–
280	617	–	–
290	638	–	–
300	660	–	–
310	682	–	–
320	704	–	–

TEMP. CRITICA $\theta_{a,cr}$ 400°C

Fattore di sezione	Classificazione di resist. al fuoco		
(m^{-1})	R15	R30	R60
75	273	407	–
80	273	438	–
85	273	469	–
90	273	499	–
95	273	530	–
100	273	561	–
110	273	622	–
120	273	683	–
130	273	745	–
140	273	804	–
150	273	848	–
160	273	891	–
170	273	935	–
180	273	978	–
190	273	1032	–
200	273	1065	–
210	292	1109	–
220	313	1152	–
230	333	1196	–
240	354	1239	–
250	375	1283	–
260	396	1331	–
270	417	–	–
280	438	–	–
290	458	–	–
300	479	–	–
310	500	–	–
320	521	–	–

TEMP. CRITICA $\theta_{a,cr}$ 450°C

Fattore di sezione	Classificazione di resist. al fuoco		
(m^{-1})	R15	R30	R60
75	273	274	1021
80	273	296	1091
85	273	318	1160
90	273	340	1230
95	273	362	1300
100	273	384	–
110	273	427	–
120	273	471	–
130	273	515	–
140	273	559	–
150	273	603	–
160	273	647	–
170	273	690	–
180	273	734	–
190	273	778	–
200	273	821	–
210	273	862	–
220	273	903	–
230	273	945	–
240	273	986	–
250	282	1027	–
260	300	1069	–
270	318	1110	–
280	336	1151	–
290	354	1193	–
300	372	1234	–
310	390	1275	–
320	408	1316	–

TEMP. CRITICA $\theta_{a,cr}$ 500°C

Fattore di sezione	Classificazione di resist. al fuoco		
(m^{-1})	R15	R30	R60
75	273	273	861
80	273	273	922
85	273	273	983
90	273	273	1044
95	273	282	1105
100	273	297	1166
110	273	327	1288
120	273	357	–
130	273	386	–
140	273	416	–
150	273	446	–
160	273	476	–
170	273	505	–
180	273	535	–
190	273	565	–
200	273	595	–
210	273	624	–
220	273	654	–
230	273	684	–
240	273	714	–
250	273	743	–
260	273	773	–
270	273	805	–
280	273	860	–
290	273	915	–
300	286	970	–
310	302	1025	–
320	317	1080	–

TEMP. CRITICA $\theta_{a,cr}$ 550°C

Fattore di sezione	Classificazione di resist. al fuoco		
(m^{-1})	R15	R30	R60
75	273	273	705
80	273	273	757
85	273	273	809
90	273	273	861
95	273	273	913
100	273	273	966
110	273	273	1070
120	273	285	1175
130	273	310	1279
140	273	336	–
150	273	361	–
160	273	386	–
170	273	412	–
180	273	437	–
190	273	462	–
200	273	488	–
210	273	513	–
220	273	539	–
230	273	564	–
240	273	589	–
250	273	615	–
260	273	640	–
270	273	665	–
280	273	691	–
290	273	716	–
300	273	742	–
310	273	767	–
320	273	792	–

TEMP. CRITICA $\theta_{a,cr}$ 600°C

Fattore di sezione	Classificazione di resist. al fuoco		
(m^{-1})	R15	R30	R60
75	273	273	571
80	273	273	614
85	273	273	656
90	273	273	698
95	273	273	741
100	273	273	783
110	273	273	871
120	273	273	961
130	273	273	1050
140	273	273	1139
150	273	276	1229
160	273	300	1316
170	273	324	–
180	273	347	–
190	273	371	–
200	273	394	–
210	273	418	–
220	273	442	–
230	273	465	–
240	273	489	–
250	273	512	–
260	273	536	–
270	273	559	–
280	273	583	–
290	273	607	–
300	273	630	–
310	273	654	–
320	273	677	–

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PROFILI CHIUSI

Elementi in acciaio tubolari "chiusi" (quadri o tondi)
Spessore minimo (in micron) F62 PAINT *S*
in funzione della temperatura critica $\theta_{a,cr}$



TEMP. CRITICA $\theta_{a,cr}$ 650°C

Fattore di sezione	Classificazione di resist. al fuoco		
(m^{-1})	R15	R30	R60
75	273	273	439
80	273	273	473
85	273	273	508
90	273	273	543
95	273	273	578
100	273	273	612
110	273	273	682
120	273	273	751
130	273	273	821
140	273	273	893
150	273	273	964
160	273	273	1036
170	273	273	1107
180	273	273	1179
190	273	273	1250
200	273	273	1320
210	273	291	–
220	273	313	–
230	273	335	–
240	273	356	–
250	273	378	–
260	273	400	–
270	273	421	–
280	273	443	–
290	273	465	–
300	273	486	–
310	273	508	–
320	273	529	–

TEMP. CRITICA $\theta_{a,cr}$ 700°C

Fattore di sezione	Classificazione di resist. al fuoco		
(m^{-1})	R15	R30	R60
75	273	273	273
80	273	273	279
85	273	273	303
90	273	273	326
95	273	273	350
100	273	273	373
110	273	273	420
120	273	273	467
130	273	273	514
140	273	273	561
150	273	273	608
160	273	273	655
170	273	273	701
180	273	273	748
190	273	273	795
200	273	273	841
210	273	273	886
220	273	273	931
230	273	273	976
240	273	273	1021
250	273	273	1066
260	273	290	1111
270	273	307	1156
280	273	323	1201
290	273	340	1246
300	273	357	1291
310	273	373	1334
320	273	390	–

TEMP. CRITICA $\theta_{a,cr}$ 750°C

Fattore di sezione	Classificazione di resist. al fuoco		
(m^{-1})	R15	R30	R60
75	273	273	273
80	273	273	273
85	273	273	273
90	273	273	273
95	273	273	273
100	273	273	273
110	273	273	303
120	273	273	337
130	273	273	370
140	273	273	403
150	273	273	437
160	273	273	470
170	273	273	503
180	273	273	537
190	273	273	570
200	273	273	603
210	273	273	637
220	273	273	670
230	273	273	703
240	273	273	737
250	273	273	770
260	273	273	805
270	273	273	853
280	273	273	902
290	273	273	950
300	273	273	999
310	273	273	1048
320	273	273	1096

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VALORI DEI FATTORI DI SEZIONE E CLASSI DI DUTTILITÀ DI PROFILATI LAMINATI

PROFILO			FLESSIONE			COMPRESSIONE		
C	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
C 75 x 6,1	311	356	1	1	–	1	1	–
C 75 x 7,4	259	298	1	1	–	1	1	–
C 75 x 8,9	219	254	1	1	–	1	1	–
C 100 x 8	301	341	1	1	–	1	1	–
C 100 x 10,8	225	256	1	1	–	1	1	–
C 130 x 10,4	285	320	1	1	–	1	1	–
C 130 x 13	219	247	1	1	–	1	1	–
C 150 x 12,2	277	308	1	1	–	1	1	–
C 150 x 15,6	218	244	1	1	–	1	1	–
C 150 x 19,3	177	199	1	1	–	1	1	–
C 180 x 14,6	266	295	1	1	–	1	1	–
C 180 x 18,2	213	237	1	1	–	1	1	–
C 180 x 22	178	199	1	1	–	1	1	–
C 200 x 17,1	234	260	1	1	–	1	2	–
C 200 x 20,5	199	222	1	1	–	1	1	–
C 200 x 27,9	146	164	1	1	–	1	1	–
C 230 x 19,9	244	268	1	1	–	1	2	–
C 230 x 22	219	241	1	1	–	1	1	–
C 230 x 30	165	182	1	1	–	1	1	–
C 250 x 22,8	218	240	1	1	–	2	3	–
C 250 x 30	167	185	1	1	–	1	1	–
C 250 x 37	141	157	1	1	–	1	1	–
C 250 x 45	114	127	1	1	–	1	1	–
C 310 x 30,8	192	210	1	1	–	2	4	–
C 310 x 37	162	178	1	1	–	1	1	–
C 310 x 45	131	145	1	1	–	1	1	–
C 380 x 50,4	150	163	1	1	–	1	2	–
C 380 x 60	125	137	1	1	–	1	1	–
C 380 x 74	100	110	1	1	–	1	1	–

PROFILO			FLESSIONE			COMPRESSIONE		
CH	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
CH 76x38x7	292	336	1	1	–	1	1	–
CH 102x51x10	258	296	1	1	–	1	1	–
CH 127x64x15	222	255	1	1	–	1	1	–
CH 152x76x18	224	258	1	1	–	1	1	–
CH 152x89x24	180	210	1	1	–	1	1	–
CH 178x76x21	210	239	1	1	–	1	1	–
CH 178x89x27	175	201	1	1	–	1	1	–
CH 203x76x24	203	228	1	1	–	1	1	–
CH 203x89x30	171	194	1	1	–	1	1	–
CH 229x76x26	200	223	1	1	–	1	1	–
CH 229x89x33	167	188	1	1	–	1	1	–
CH 245x76x28	196	217	1	1	–	1	1	–
CH 245x89x36	163	183	1	1	–	1	1	–
CH 305x89x42	159	175	1	1	–	1	1	–
CH 305x102x46	153	170	1	1	–	1	1	–
CH 305x102x55	149	164	1	1	–	1	2	–
CH 432x102x65	138	151	1	1	–	1	2	–

PROFILO			FLESSIONE			COMPRESSIONE		
H	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
H 100x100x6x8	219	265	1	1	–	1	1	–
H 125x125x6,5x9	199	241	1	1	–	1	1	–
H 150x75x5x7	281	323	1	1	–	1	1	–
H 150x150x7x10	182	220	1	1	–	1	1	–
H 175x175x7,5x11	163	197	1	1	–	1	1	–
H 200x100x4,5x7	295	339	1	1	–	2	4	–
H 200x100x5,5x8	253	291	1	1	–	1	2	–
H 200x200x8x12	151	183	1	2	–	1	2	–
H 200x200x12x12	135	164	1	2	–	1	2	–
H 250x125x5x8	264	303	1	1	–	4	4	–
H 250x125x6x9	230	264	1	1	–	2	4	–
H 250x250x11x11	148	179	3	3	–	3	3	–
H 250x250x9x14	132	160	1	2	–	1	2	–
H 250x250x14x14	117	141	1	3	–	1	3	–
H 300x150x5,5x8	247	284	1	3	–	4	4	–
H 300x150x6,5x9	217	249	1	2	–	3	4	–
H 300x300x12x12	136	165	3	4	–	3	4	–
H 300x300x10x15	123	148	1	3	–	1	3	–
H 300x300x15x15	110	132	2	3	–	2	3	–
H 350x175x6x9	225	258	1	3	–	4	4	–
H 350x175x7x11	189	217	1	1	–	4	4	–
H 350x350x13x13	126	152	3	4	–	3	4	–
H 350x350x10x16	117	141	2	3	–	2	3	–
H 350x350x16x16	103	124	3	3	–	3	3	–
H 350x350x12x19	99	119	1	3	–	1	3	–
H 350x350x19x19	87	105	1	3	–	1	3	–
H 400x300x10x16	123	145	1	3	–	2	3	–
H 400x400x15x15	107	130	3	4	–	3	4	–
H 400x400x11x18	103	124	3	3	–	3	3	–
H 400x400x18x18	90	109	3	3	–	3	3	–
H 400x400x13x21	89	107	1	3	–	1	3	–
H 400x400x21x21	78	94	1	3	–	1	3	–
H 400x400x18x28	67	80	1	1	–	1	1	–
H 400x400x20x35	55	67	1	1	–	1	1	–
H 400x400x30x50	39	47	1	1	–	1	1	–
H 500x200x9x14	156	176	1	1	–	4	4	–
H 500x200x10x16	139	157	1	1	–	4	4	–
H 500x200x11x19	121	137	1	1	–	3	4	–
H 500x300x11x15	129	150	1	3	–	3	4	–
H 500x300x11x18	115	134	1	2	–	3	4	–
H 600x300x12x17	119	137	1	2	–	4	4	–
H 600x300x12x20	108	124	1	1	–	4	4	–
H 600x300x14x23	94	108	1	1	–	2	4	–
H 700x300x13x20	107	122	1	1	–	4	4	–
H 700x300x13x24	97	110	1	1	–	4	4	–
H 800x300x14x22	101	114	1	1	–	4	4	–
H 800x300x14x26	93	104	1	1	–	4	4	–
H 900x300x15x23	98	109	1	1	–	4	4	–
H 900x300x16x28	86	96	1	1	–	4	4	–
H 900x300x18x34	74	82	1	1	–	4	4	–

VALORI DEI FATTORI DI SEZIONE E CLASSI DI DUTTILITÀ DI PROFILATI LAMINATI

PROFILO			FLESSIONE			COMPRESSIONE		
HD	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
HD 260 x 68,2	141	171	2	3	3	2	3	3
HD 260 x 93,0	105	127	1	1	2	1	1	2
HD 260 x 114	86	104	1	1	1	1	1	1
HD 260 x 142	71	86	1	1	1	1	1	1
HD 260 x 172	59	72	1	1	1	1	1	1
HD 320 x 74,2	152	184	3	4	4	3	4	4
HD 320 x 97,6	117	141	1	3	3	1	3	3
HD 320 x 127	91	110	1	1	2	1	1	2
HD 320 x 158	74	89	1	1	1	1	1	1
HD 320 x 198	60	72	1	1	1	1	1	1
HD 320 x 245	50	60	1	1	1	1	1	1
HD 320 x 300	42	50	1	1	1	1	1	1
HD 360 x 134	104	125	2	3	3	2	3	3
HD 360 x 147	95	114	1	3	3	1	3	3
HD 360 x 162	87	105	1	2	3	1	2	3
HD 360 x 179	79	95	1	1	2	1	1	2
HD 360 x 196	72	87	1	1	1	1	1	1
HD 400 x 187	78	94	1	2	3	1	2	3
HD 400 x 216	68	82	1	1	1	1	1	1
HD 400 x 237	63	76	1	1	1	1	1	1
HD 400 x 262	57	69	1	1	1	1	1	1
HD 400 x 287	52	63	1	1	1	1	1	1
HD 400 x 314	48	58	1	1	1	1	1	1
HD 400 x 347	44	53	1	1	1	1	1	1
HD 400 x 382	40	49	1	1	1	1	1	1
HD 400 x 421	37	45	1	1	1	1	1	1
HD 400 x 463	34	41	1	1	1	1	1	1
HD 400 x 509	31	38	1	1	1	1	1	1
HD 400 x 551	29	35	1	1	1	1	1	1
HD 400 x 592	28	33	1	1	1	1	1	1
HD 400 x 634	26	31	1	1	1	1	1	1
HD 400 x 677	25	30	1	1	1	1	1	1
HD 400 x 744	23	27	1	1	1	1	1	1
HD 400 x 818	21	25	1	1	1	1	1	1
HD 400 x 900	19	23	1	1	1	1	1	1
HD 400 x 990	18	22	1	1	1	1	1	1
HD 400 x 1086	17	20	1	1	1	1	1	1

PROFILO			FLESSIONE			COMPRESSIONE		
HE	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
HE 100 AA	290	355	1	3	3	1	3	3
HE 100 A	217	264	1	1	1	1	1	1
HE 100 B	180	218	1	1	1	1	1	1
HE 100 M	96	116	1	1	1	1	1	1
HE 120 AA	296	361	2	3	4	2	3	4
HE 120 A	220	267	1	1	2	1	1	2
HE 120 B	167	202	1	1	1	1	1	1
HE 120 M	92	111	1	1	1	1	1	1
HE 140 AA	281	342	3	3	4	3	3	4

PROFILO			FLESSIONE			COMPRESSIONE		
HE	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
HE 140 A	208	253	1	2	3	1	2	3
HE 140 B	155	187	1	1	1	1	1	1
HE 140 M	88	106	1	1	1	1	1	1
HE 160 AA	244	297	3	3	4	3	3	4
HE 160 A	192	234	1	2	3	1	2	3
HE 160 B	140	169	1	1	1	1	1	1
HE 160 M	83	100	1	1	1	1	1	1
HE 180 AA	229	279	3	3	4	3	3	4
HE 180 A	187	226	1	3	3	1	3	3
HE 180 B	131	159	1	1	1	1	1	1
HE 180 M	80	96	1	1	1	1	1	1
HE 200 AA	211	256	3	4	4	3	4	4
HE 200 A	174	211	1	3	3	1	3	3
HE 200 B	122	147	1	1	1	1	1	1
HE 200 M	76	92	1	1	1	1	1	1
HE 220 AA	200	242	3	4	4	3	4	4
HE 220 A	161	195	1	3	3	1	3	3
HE 220 B	115	140	1	1	1	1	1	1
HE 220 M	73	88	1	1	1	1	1	1
HE 240 AA	185	225	3	4	4	3	4	4
HE 240 A	147	178	1	3	3	1	3	3
HE 240 B	108	131	1	1	1	1	1	1
HE 240 M	61	73	1	1	–	1	1	–
HE 260 AA	176	214	3	4	4	3	4	4
HE 260 A	141	171	2	3	3	2	3	3
HE 260 B	105	127	1	1	2	1	1	2
HE 260 M	59	72	1	1	1	1	1	1
HE 280 AA	168	204	3	4	4	3	4	4
HE 280 A	136	165	2	3	4	2	3	4
HE 280 B	102	123	1	1	2	1	1	2
HE 280 M	59	71	1	1	1	1	1	1
HE 300 AA	158	192	3	4	4	3	4	4
HE 300 A	126	153	2	3	3	2	3	3
HE 300 B	96	116	1	1	3	1	1	3
HE 300 M	50	60	1	1	1	1	1	1
HE 320 AA	152	184	3	4	4	3	4	4
HE 320 A	117	141	1	3	3	1	3	3
HE 320 B	91	110	1	1	2	1	1	2
HE 320 M	50	60	1	1	1	1	1	1
HE 340 AA	147	177	3	4	4	3	4	4
HE 340 A	112	134	1	3	3	1	3	3
HE 340 B	88	106	1	1	1	1	1	1
HE 340 M	50	60	1	1	1	1	1	1
HE 360 AA	142	170	3	4	4	3	4	4
HE 360 A	107	128	1	2	3	1	2	3
HE 360 B	86	102	1	1	1	1	1	1
HE 360 M	51	61	1	1	1	1	1	1
HE 400 AA	135	161	3	3	4	3	3	4
HE 400 A	101	120	1	1	3	1	2	3
HE 400 B	82	97	1	1	1	1	1	1
HE 400 M	52	62	1	1	1	1	1	1
HE 450 AA	133	156	3	3	4	3	4	4
HE 450 A	96	113	1	1	1	1	2	3

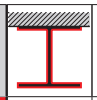
VALORI DEI FATTORI DI SEZIONE E CLASSI DI DUTTILITÀ DI PROFILATI LAMINATI

PROFILO			FLESSIONE			COMPRESSIONE		
HE	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
HE 450 B	79	93	1	1	1	1	1	2
HE 450 M	53	62	1	1	1	1	1	1
HE 500 AA	130	152	2	3	3	2	4	4
HE 500 A	92	107	1	1	1	1	3	4
HE 500 B	76	89	1	1	1	1	2	2
HE 500 M	55	63	1	1	1	1	1	1
HE 550 AA	123	142	1	3	3	3	4	4
HE 550 A	90	104	1	1	1	2	4	4
HE 550 B	76	88	1	1	1	1	2	3
HE 550 M	56	64	1	1	1	1	1	1
HE 600 AA	120	138	1	3	3	3	4	4
HE 600 A	89	102	1	1	1	2	4	4
HE 600 B	75	86	1	1	1	1	3	4
HE 600 M	57	65	1	1	1	1	1	1
HE 600 x 337	49	56	1	1	1	1	1	1
HE 600 x 399	42	48	1	1	1	1	1	1
HE 650 AA	118	135	1	3	3	4	4	4
HE 650 A	87	100	1	1	1	3	4	4
HE 650 B	74	85	1	1	1	2	3	4
HE 650 M	58	66	1	1	1	1	1	2
HE 650 x 343	50	57	1	1	1	1	1	1
HE 650 x 407	43	49	1	1	1	1	1	1
HE 700 AA	114	129	1	2	3	4	4	4
HE 700 A	85	96	1	1	1	3	4	4
HE 700 B	72	82	1	1	1	2	4	4
HE 700 M	59	67	1	1	1	1	2	3
HE 700 x 352	51	58	1	1	1	1	1	1
HE 700 x 418	44	50	1	1	1	1	1	1
HE 800 AA	108	122	1	2	3	4	4	4
HE 800 A	84	94	1	1	1	4	4	4
HE 800 B	72	81	1	1	1	3	4	4
HE 800 M	60	68	1	1	1	1	3	4
HE 800 x 373	52	59	1	1	1	1	2	2
HE 800 x 444	44	50	1	1	1	1	1	1
HE 900 AA	101	113	1	1	2	4	4	4
HE 900 A	81	90	1	1	1	4	4	4
HE 900 B	70	78	1	1	1	3	4	4
HE 900 M	62	69	1	1	1	2	4	4
HE 900 x 391	54	60	1	1	1	1	3	4
HE 900 x 466	45	51	1	1	1	1	1	2
HE 1000 AA	98	108	1	1	–	4	4	–
HE 1000 x 249	88	97	1	1	2	4	4	4
HE 1000 A	81	89	1	1	2	4	4	4
HE 1000 B	70	78	1	1	1	4	4	4
HE 1000 M	64	70	1	1	1	3	4	4
HE 1000 x 393	57	63	1	1	1	2	4	4
HE 1000 x 415	54	60	1	1	1	2	3	4
HE 1000 x 438	51	57	1	1	1	1	3	4
HE 1000 x 494	46	51	1	1	1	1	2	3
HE 1000 x 584	39	44	1	1	1	1	1	2

PROFILO			FLESSIONE			COMPRESSIONE		
HL	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
HL 920 x 345	69	62	1	1	1	4	4	4
HL 920 x 368	65	58	1	1	1	3	4	4
HL 920 x 390	61	55	1	1	1	3	4	4
HL 920 x 420	57	51	1	1	1	2	4	4
HL 920 x 449	53	48	1	1	1	2	4	4
HL 920 x 491	49	44	1	1	1	1	3	4
HL 920 x 537	45	41	1	1	1	1	2	3
HL 920 x 588	42	37	1	1	1	1	1	2
HL 920 x 656	38	34	1	1	1	1	1	2
HL 920 x 725	32	31	1	1	1	1	1	1
HL 920 x 787	26	29	1	1	1	1	1	1
HL 920 x 970	82	24	1	1	1	1	1	1
HL 1000 AA	76	73	1	1	2	4	4	4
HL 1000 A	66	68	1	1	2	4	4	4
HL 1000 B	60	59	1	1	1	4	4	4
HL 1000 M	51	54	1	1	1	3	4	4
HL 1000 x 443	46	50	1	1	1	2	4	4
HL 1000 x 483	45	46	1	1	1	2	4	4
HL 1000 x 539	42	42	1	1	1	1	2	4
HL 1000 x 554	39	41	1	1	1	1	2	3
HL 1000 x 591	34	39	1	1	1	1	2	3
HL 1000 x 642	29	36	1	1	1	1	1	2
HL 1000 x 748	76	31	1	1	1	1	1	1
HL 1000 x 883	67	27	1	1	–	1	1	–
HL 1100 A	61	68	1	1	2	4	4	4
HL 1100 B	53	60	1	1	1	4	4	4
HL 1100 M	53	55	1	1	1	4	4	4
HL 1100 R	42	48	1	1	1	2	4	4

PROFILO			FLESSIONE			COMPRESSIONE		
HP	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
HP 200 x 43	181	219	3	3	4	3	3	4
HP 200 x 53	145	176	1	3	3	1	3	3
HP 220 x 57	143	174	2	3	3	2	3	3
HP 260 x 75	129	156	3	3	4	3	3	4
HP 260 x 87	111	135	1	3	3	1	3	3
HP 305 x 79	147	178	3	4	4	3	4	4
HP 305 x 88	132	159	3	4	4	3	4	4
HP 305 x 95	122	148	3	3	4	3	3	4
HP 305 x 110	106	129	2	3	3	2	3	3
HP 305 x 126	94	113	1	2	3	1	2	3
HP 305 x 149	80	97	1	1	2	1	1	2
HP 305 x 180	67	81	1	1	1	1	1	1
HP 305 x 186	65	79	1	1	1	1	1	1
HP 305 x 223	55	67	1	1	1	1	1	1
HP 320 x 88	128	155	3	4	4	3	4	4

VALORI DEI FATTORI DI SEZIONE E CLASSI DI DUTTILITÀ DI PROFILATI LAMINATI

PROFILO			FLESSIONE			COMPRESSIONE		
HP	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
HP 320 x 103	111	135	2	3	4	2	3	4
HP 320 x 117	98	119	1	3	3	1	3	3
HP 320 x 147	80	96	1	1	2	1	1	2
HP 320 x 184	65	78	1	1	1	1	1	1
HP 360 x 84	162	196	4	4	4	4	4	4
HP 360 x 109	126	153	3	4	4	3	4	4
HP 360 x 133	104	126	3	3	4	3	3	4
HP 360 x 152	92	111	2	3	3	2	3	3
HP 360 x 174	81	98	1	3	3	1	3	3
HP 360 x 180	78	95	1	3	3	1	3	3
HP 400 x 122	116	141	3	4	4	3	4	4
HP 400 x 140	102	124	3	4	4	3	4	4
HP 400 x 158	91	111	2	3	4	2	3	4
HP 400 x 176	82	100	1	3	3	1	3	3
HP 400 x 194	75	91	1	3	3	1	3	3
HP 400 x 213	69	84	1	2	3	1	2	3
HP 400 x 231	64	77	1	1	2	1	1	2

PROFILO			FLESSIONE			COMPRESSIONE		
INP	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
INP 80	346	401	4	4	–	4	4	–
INP 100	302	349	1	1	–	1	1	–
INP 120	268	309	1	1	–	1	1	–
INP 140	238	274	1	1	–	1	1	–
INP 160	220	252	1	1	–	1	1	–
INP 180	200	229	1	1	–	1	1	–
INP 200	185	212	1	1	–	1	1	–
INP 220	171	196	1	1	–	1	1	–
INP 240	160	183	1	1	–	1	1	–
INP 260	149	170	1	1	–	1	1	–
INP 280	139	158	1	1	–	1	1	–
INP 300	131	149	1	1	–	1	1	–
INP 320	123	140	1	1	–	1	1	–
INP 340	117	133	1	1	–	1	1	–
INP 360	110	125	1	1	–	1	1	–
INP 380	105	119	1	1	–	1	1	–
INP 400	100	113	1	1	–	1	1	–
INP 450	89	101	1	1	–	1	1	–
INP 500	81	91	1	1	–	1	1	–
INP 550	75	85	1	1	–	1	1	–
INP 600	68	76	1	1	–	1	1	–

PROFILO			FLESSIONE			COMPRESSIONE		
IPE	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
IPE 80 A	437	509	1	1	–	1	1	–
IPE 80	369	429	1	1	–	1	1	–
IPE A 100	389	452	1	1	–	1	1	–
IPE 100	334	387	1	1	–	1	1	–
IPE A 120	370	428	1	1	1	1	1	2
IPE 120	311	360	1	1	1	1	1	1
IPE A 140	354	409	1	1	1	1	2	3
IPE 140	291	335	1	1	1	1	1	2
IPE A 160	332	382	1	1	1	1	3	4
IPE 160	269	310	1	1	1	1	1	2
IPE A 180	308	354	1	1	1	2	3	4
IPE 180	253	291	1	1	1	1	2	3
IPE O 180	226	260	1	1	1	1	1	2
IPE A 200	283	326	1	1	1	2	4	4
IPE 200	235	270	1	1	1	1	2	3
IPE O 200	212	244	1	1	1	1	1	2
IPE A 220	260	298	1	1	1	2	4	4
IPE 220	221	254	1	1	1	1	2	4
IPE O 220	200	230	1	1	1	1	2	2
IPE A 240	240	276	1	1	2	2	4	4
IPE 240	205	236	1	1	1	1	2	4
IPE O 240	185	213	1	1	1	1	2	3
IPE A 270	230	265	1	1	2	3	4	4
IPE 270	197	227	1	1	1	2	3	4
IPE O 270	170	195	1	1	1	1	2	3
IPE A 300	216	248	1	2	3	3	4	4
IPE 300	188	216	1	1	1	2	4	4
IPE O 300	163	187	1	1	1	1	3	4
IPE A 330	199	228	1	1	2	3	4	4
IPE 330	175	200	1	1	1	2	4	4
IPE O 330	152	175	1	1	1	1	3	4
IPE A 360	185	211	1	1	2	4	4	4
IPE 360	163	186	1	1	1	2	4	4
IPE O 360	142	162	1	1	1	1	3	4
IPE A 400	176	200	1	1	2	4	4	4
IPE 400	152	174	1	1	1	3	4	4
IPE O 400	135	154	1	1	1	2	3	4
IPE A 450	165	187	1	1	2	4	4	4
IPE 450	143	162	1	1	1	3	4	4
IPE O 450	122	138	1	1	1	2	4	4
IPE A 500	152	172	1	1	1	4	4	4
IPE 500	134	151	1	1	1	3	4	4
IPE O 500	114	129	1	1	1	2	4	4
IPE A 550	142	160	1	1	2	4	4	4
IPE 550	124	140	1	1	1	4	4	4
IPE O 550	108	121	1	1	1	2	4	4
IPE A 600	131	147	1	1	2	4	4	4
IPE 600	115	129	1	1	1	4	4	4
IPE O 600	93	104	1	1	1	2	4	4
750 x 137	128	144	1	2	–	4	4	–
750 x 147	120	134	1	1	2	4	4	4
750 x 173	102	114	1	1	1	4	4	4
750 x 196	91	102	1	1	1	4	4	4

VALORI DEI FATTORI DI SEZIONE E CLASSI DI DUTTILITÀ DI PROFILATI LAMINATI

PROFILO			FLESSIONE			COMPRESSIONE		
J	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
J 76 x 76 x 13	220	268	1	1	–	1	1	–
J 76 x 76 x 15	191	234	1	1	–	1	1	–
J 89 x 89 x 19	169	205	1	1	–	1	1	–
J 102 x 44 x 7	335	383	1	1	–	1	1	–
J 102 x 102 x 23	163	198	1	1	–	1	1	–
J 114 x 114 x 27	155	189	1	1	–	1	1	–
J 127 x 76 x 16	217	254	1	1	–	1	1	–
J 127 x 114 x 27	164	198	1	1	–	1	1	–
J 127 x 114 x 29	151	182	1	1	–	1	1	–
J 152 x 127 x 37	137	164	1	1	–	1	1	–
J 203 x 152 x 52	124	147	1	1	–	1	1	–
J 254 x 114 x 37	174	198	1	1	–	1	1	–
J 254 x 203 x 82	102	121	1	1	–	1	1	–

PROFILO			FLESSIONE			COMPRESSIONE		
PFC	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
PFC 100x50x10	254	292	1	1	–	1	1	–
PFC 125x65x15	226	261	1	1	–	1	1	–
PFC 150x75x18	222	255	1	1	–	1	1	–
PFC 150x90x24	181	210	1	1	–	1	1	–
PFC 180x75x20	218	247	1	1	–	1	1	–
PFC 180x90x26	184	211	1	1	–	1	1	–
PFC 200x75x23	203	228	1	1	–	1	1	–
PFC 200x90x30	172	195	1	1	–	1	1	–
PFC 230x75x26	203	226	1	1	–	1	2	–
PFC 230x90x32	171	193	1	1	–	1	1	–
PFC 260x75x28	206	228	1	1	–	1	2	–
PFC 260x90x35	171	192	1	1	–	1	1	–
PFC 300x90x41	159	176	1	1	–	1	2	–
PFC 300x100x46	150	167	1	1	–	1	1	–
PFC 380x100x54	150	164	1	1	–	2	3	–
PFC 430x100x64	149	161	1	1	–	1	3	–

PROFILO			FLESSIONE			COMPRESSIONE		
MC	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
MC 150 x 17,9	205	233	1	1	–	1	1	–
MC 150 x 22,5	173	199	1	1	–	1	1	–
MC 150 x 22,8	183	213	1	1	–	1	1	–
MC 150 x 24,3	159	184	1	1	–	1	1	–
MC 150 x 26,8	156	182	1	1	–	1	1	–
MC 180 x 28,4	161	185	1	1	–	1	1	–
MC 180 x 33,8	137	158	1	1	–	1	1	–
MC 200 x 12,6	331	361	1	1	–	2	4	–
MC 200 x 27,8	171	192	1	1	–	1	1	–
MC 200 x 29,8	159	179	1	1	–	1	1	–
MC 200 x 31,8	156	178	1	1	–	1	1	–
MC 200 x 33,9	146	167	1	1	–	1	1	–
MC 230 x 35,6	151	170	1	1	–	1	1	–
MC 230 x 37,8	142	160	1	1	–	1	1	–
MC 250 x 12,5	377	401	1	1	–	4	4	–
MC 250 x 33	173	193	1	1	–	1	1	–
MC 250 x 37	156	174	1	1	–	1	1	–
MC 250 x 42,4	143	161	1	1	–	1	1	–
MC 250 x 50	122	139	1	1	–	1	1	–
MC 250 x 61,2	100	114	1	1	–	1	1	–
MC 310 x 15,8	354	373	1	1	–	4	4	–
MC 310 x 46	149	165	1	1	–	1	1	–
MC 310 x 52	131	145	1	1	–	1	1	–
MC 310 x 60	114	127	1	1	–	1	1	–
MC 310 x 67	102	114	1	1	–	1	1	–
MC 310 x 74	93	104	1	1	–	1	1	–
MC 330 x 47,3	156	172	1	1	–	1	1	–
MC 330 x 52	141	157	1	1	–	1	1	–
MC 330 x 60	124	138	1	1	–	1	1	–
MC 330 x 74	100	112	1	1	–	1	1	–
MC 460 x 63,5	146	158	1	1	–	1	3	–
MC 460 x 68,2	137	149	1	1	–	1	2	–
MC 460 x 77,2	121	131	1	1	–	1	1	–
MC 460 x 86	109	119	1	1	–	1	1	–

PROFILO			FLESSIONE			COMPRESSIONE		
S	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
S 75 x 8,5	287	342	1	1	–	1	1	–
S 75 x 11,2	228	273	1	1	–	1	1	–
S 100 x 11,5	268	314	1	1	–	1	1	–
S 100 x 14,1	222	262	1	1	–	1	1	–
S 130 x 15	246	286	1	1	–	1	1	–
S 150 x 18,6	231	267	1	1	–	1	1	–
S 150 x 25,7	168	196	1	1	–	1	1	–
S 200 x 27,4	197	227	1	1	–	1	1	–
S 200 x 34	159	183	1	1	–	1	1	–
S 250 x 37,8	175	200	1	1	–	1	1	–
S 250 x 52	127	146	1	1	–	1	1	–
S 310 x 47,3	161	182	1	1	–	1	2	–
S 310 x 52	146	166	1	1	–	1	1	–
S 310 x 60,7	126	144	1	1	–	1	1	–
S 310 x 74	104	118	1	1	–	1	1	–
S 380 x 64	141	158	1	1	–	1	3	–
S 380 x 74	122	137	1	1	–	1	1	–
S 460 x 81,4	129	144	1	1	–	2	3	–
S 460 x 104	102	113	1	1	–	1	1	–
S 510 x 98,2	117	130	1	1	–	2	3	–
S 510 x 112	104	115	1	1	–	1	2	–
S 510 x 128	93	104	1	1	–	1	1	–
S 510 x 143	84	94	1	1	–	1	1	–
S 610 x 119	114	125	1	1	–	4	4	–
S 610 x 134	101	111	1	1	–	2	3	–
S 610 x 149	91	100	1	1	–	1	2	–
S 610 x 158	90	100	1	1	–	2	3	–
S 610 x 180	78	87	1	1	–	1	1	–

VALORI DEI FATTORI DI SEZIONE E CLASSI DI DUTTILITÀ DI PROFILATI LAMINATI

PROFILO			FLESSIONE			COMPRESSIONE		
U	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
U 40 x 20	355	410	1	1	–	1	1	–
U 50 x 25	316	366	1	1	–	1	1	–
U 60 x 30	295	341	1	1	–	1	1	–
U 65 x 42	264	311	1	1	–	1	1	–

PROFILO			FLESSIONE			COMPRESSIONE		
UB	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
UB 127 x 76 x 13	279	325	1	1	–	1	1	–
UB 152 x 89 x 16	270	314	1	1	–	1	2	–
UB 178 x 102 x 19	262	304	1	1	1	1	2	4
UB 203 x 102 x 23	234	269	1	1	1	1	3	4
UB 203 x 133 x 25	244	286	1	2	3	1	2	4
UB 203 x 133 x 30	207	242	1	1	1	1	2	2
UB 254 x 102 x 22	281	318	1	1	–	3	4	–
UB 254 x 102 x 25	248	280	1	1	–	2	4	–
UB 254 x 102 x 28	222	251	1	1	–	2	4	–
UB 254 x 146 x 31	231	268	1	2	–	2	4	–
UB 254 x 146 x 37	196	227	1	1	–	2	4	–
UB 254 x 146 x 43	170	197	1	1	–	1	2	–
UB 305 x 102 x 25	282	314	1	1	–	4	4	–
UB 305 x 102 x 28	250	279	1	1	–	4	4	–
UB 305 x 102 x 33	217	241	1	1	–	3	4	–
UB 305 x 127 x 37	201	227	1	1	–	2	4	–
UB 305 x 127 x 42	179	202	1	1	–	2	3	–
UB 305 x 127 x 48	158	178	1	1	–	1	2	–
UB 305 x 165 x 40	209	242	1	1	–	4	4	–
UB 305 x 165 x 46	184	212	1	1	–	3	4	–
UB 305 x 165 x 54	159	183	1	1	–	2	3	–
UB 356 x 127 x 33	248	278	1	1	–	4	4	–
UB 356 x 127 x 39	212	237	1	1	–	4	4	–
UB 356 x 171 x 45	207	236	1	2	–	4	4	–
UB 356 x 171 x 51	184	210	1	1	–	4	4	–
UB 356 x 171 x 57	165	189	1	1	–	3	4	–
UB 356 x 171 x 67	142	162	1	1	–	2	4	–
UB 406 x 140 x 39	240	268	1	2	–	4	4	–
UB 406 x 140 x 46	205	229	1	1	–	4	4	–
UB 406 x 178 x 54	189	215	1	2	3	4	4	4
UB 406 x 178 x 60	172	195	1	1	1	4	4	4
UB 406 x 178 x 67	154	175	1	1	1	3	4	4
UB 406 x 178 x 74	140	159	1	1	1	2	4	4
UB 457 x 152 x 52	199	222	1	1	2	4	4	4
UB 457 x 152 x 60	175	195	1	1	1	4	4	4
UB 457 x 152 x 67	157	175	1	1	1	4	4	4
UB 457 x 152 x 74	143	159	1	1	1	4	4	4
UB 457 x 152 x 82	130	145	1	1	1	3	4	4
UB 457 x 191 x 67	169	191	1	1	2	4	4	4
UB 457 x 191 x 74	153	173	1	1	1	4	4	4
UB 457 x 191 x 82	139	158	1	1	1	3	4	4
UB 457 x 191 x 89	129	146	1	1	1	3	4	4

PROFILO			FLESSIONE			COMPRESSIONE		
UB	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
UB 457 x 191 x 98	118	133	1	1	1	2	4	4
UB 533 x 210 x 82	157	177	1	1	3	4	4	4
UB 533 x 210 x 92	141	159	1	1	1	4	4	4
UB 533 x 210 x101	129	145	1	1	1	4	4	4
UB 533 x210 x109	120	135	1	1	1	3	4	4
UB 533 x 210 x122	108	122	1	1	1	2	4	4
UB 610 x 229 x101	143	161	1	1	2	4	4	4
UB 610 x 229 x113	129	145	1	1	1	4	4	4
UB 610 x 229 x125	117	131	1	1	1	4	4	4
UB 610 x 229 x140	105	118	1	1	1	3	4	4
UB 610 x 305 x149	110	126	1	1	2	4	4	4
UB 610 x 305 x179	92	106	1	1	1	3	4	4
UB 610 x 305 x238	71	81	1	1	1	1	2	3
UB 686 x 254 x125	130	145	1	1	2	4	4	4
UB 686 x 254 x140	116	131	1	1	1	4	4	4
UB 686 x 254 x152	107	121	1	1	1	4	4	4
UB 686 x 254 x170	97	109	1	1	1	4	4	4
UB 762 x 267 x147	120	134	1	1	2	4	4	4
UB 762 x 267 x173	103	115	1	1	1	4	4	4
UB 762 x 267 x197	91	102	1	1	1	4	4	4
UB 838 x 292 x176	111	124	1	1	2	4	4	4
UB 838 x 292 x194	101	113	1	1	2	4	4	4
UB 838 x 292 x226	87	98	1	1	1	4	4	4
UB 914 x 305 x201	104	116	1	1	–	4	4	–
UB 914 x 305 x224	93	104	1	1	2	4	4	4
UB 914 x 305 x 253	83	93	1	1	1	4	4	4
UB 914 x 305 x289	73	82	1	1	1	4	4	4
UB 914 x 419 x343	69	78	1	1	1	3	4	4
UB 914 x 419 x388	61	70	1	1	1	2	4	4
UB1016 x305 x222	98	108	1	1	–	4	4	–
UB1016 x 305 x249	88	97	1	1	2	4	4	4
UB1016 x 305 x272	81	89	1	1	2	4	4	4
UB1016 x 305 x314	70	78	1	1	1	4	4	4
UB1016 x 305 x349	64	70	1	1	1	3	4	4
UB1016 x 305 x393	57	63	1	1	1	2	4	4
UB1016 x305 x415	54	60	1	1	1	2	3	4
UB1016 x 305 x438	51	57	1	1	1	1	3	4
UB1016 x 305 x494	46	51	1	1	1	1	2	3
UB1016 x 305 x584	39	44	1	1	1	1	1	2

PROFILO			FLESSIONE			COMPRESSIONE		
UBP	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
UBP 203x203x45	172	208	2	3	4	2	3	4
UBP 203x203x54	144	174	1	3	3	1	3	3
UBP 254x254x63	152	184	3	3	4	3	3	4
UBP 254x254x71	136	164	2	3	4	2	3	4
UBP 254x254x85	114	138	1	3	3	1	3	3
UBP 305x305x79	146	177	3	4	4	3	4	4
UBP 305x305x88	132	159	3	4	4	3	4	4

VALORI DEI FATTORI DI SEZIONE E CLASSI DI DUTTILITÀ DI PROFILATI LAMINATI

PROFILO			FLESSIONE			COMPRESSIONE		
UBP	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
UBP 305x305x95	122	148	3	3	4	3	3	4
UBP 305x305x110	106	129	2	3	3	2	3	3
UBP 305x305x126	94	113	1	2	3	1	2	3
UBP 305x305x149	80	97	1	1	2	1	1	2
UBP 305x305x186	65	79	1	1	1	1	1	1
UBP 305x305x223	55	67	1	1	1	1	1	1
UBP 356x368x109	126	153	3	4	4	3	4	4
UBP 356x368x133	104	126	3	3	4	3	3	4
UBP 356x368x152	92	111	2	3	3	2	3	3
UBP 356x368x174	81	98	1	3	3	1	3	3

PROFILO			FLESSIONE			COMPRESSIONE		
UC	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
UC 152 x 152 x 23	252	304	3	3	4	3	3	4
UC 152 x 152 x 30	195	235	1	1	3	1	1	3
UC 152 x 152 x 37	161	194	1	1	1	1	1	1
UC 203 x 203 x 46	168	202	1	3	3	1	3	3
UC 203 x 203 x 52	150	180	1	2	3	1	2	3
UC 203 x 203 x 60	131	158	1	1	2	1	1	2
UC 203 x 203 x 71	112	135	1	1	1	1	1	1
UC 203 x 203 x 86	94	113	1	1	1	1	1	1
UC 254 x 254 x 73	132	160	1	3	3	1	3	3
UC 254 x 254 x 89	110	133	1	1	2	1	1	2
UC 254 x 254 x 107	93	112	1	1	1	1	1	1
UC 254 x 254 x 132	76	92	1	1	1	1	1	1
UC 254 x 254 x 167	62	74	1	1	1	1	1	1
UC 305 x 305 x 97	120	145	1	3	3	1	3	3
UC 305 x 305 x 118	100	120	1	2	3	1	2	3
UC 305 x 305 x 137	87	105	1	1	1	1	1	1
UC 305 x 305 x 158	76	91	1	1	1	1	1	1
UC 305 x 305 x 198	62	74	1	1	1	1	1	1
UC 305 x 305 x 240	52	62	1	1	1	1	1	1
UC 305 x 305 x 283	45	54	1	1	1	1	1	1
UC 356 x 368 x 129	108	130	2	3	3	2	3	3
UC 356 x 368 x 153	92	111	1	2	3	1	2	3
UC 356 x 368 x 177	80	96	1	1	2	1	1	2
UC 356 x 368 x 202	71	85	1	1	1	1	1	1
UC 356 x 406 x 235	63	76	1	1	1	1	1	1
UC 356 x 406 x 287	52	63	1	1	1	1	1	1
UC 356 x 406 x 340	45	54	1	1	1	1	1	1
UC 356 x 406 x 393	39	48	1	1	1	1	1	1
UC 356 x 406 x 467	34	41	1	1	1	1	1	1
UC 356 x 406 x 551	29	35	1	1	1	1	1	1
UC 356 x 406 x 634	26	31	1	1	1	1	1	1

PROFILO			FLESSIONE			COMPRESSIONE		
UPE	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
UPE 80	291	341	1	1	–	1	1	–
UPE 100	278	322	1	1	–	1	1	–
UPE 120	259	298	1	1	–	1	1	–
UPE 140	247	282	1	1	–	1	1	–
UPE 160	235	267	1	1	–	1	1	–
UPE 180	225	254	1	1	–	1	1	–
UPE 200	213	240	1	1	–	1	1	–
UPE 220	198	223	1	1	–	1	1	–
UPE 240	188	211	1	1	–	1	1	–
UPE 270	178	199	1	1	–	1	2	–
UPE 300	153	171	1	1	–	1	1	–
UPE 330	138	153	1	1	–	1	1	–
UPE 360	130	144	1	1	–	1	1	–
UPE 400	120	133	1	1	–	1	1	–

PROFILO			FLESSIONE			COMPRESSIONE		
UPN	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
UPN 80	250	291	1	1	–	1	1	–
UPN 100	239	276	1	1	–	1	1	–
UPN 120	223	255	1	1	–	1	1	–
UPN 140	210	240	1	1	–	1	1	–
UPN 160	200	228	1	1	–	1	1	–
UPN 180	193	218	1	1	–	1	1	–
UPN 200	182	205	1	1	–	1	1	–
UPN 220	171	192	1	1	–	1	1	–
UPN 240	163	183	1	1	–	1	1	–
UPN 260	154	173	1	1	–	1	1	–
UPN 280	149	167	1	1	–	1	1	–
UPN 300	145	162	1	1	–	1	1	–
UPN 320	116	130	1	1	–	1	1	–
UPN 350	123	135	1	1	–	1	1	–
UPN 380	125	138	1	1	–	1	1	–
UPN 400	117	129	1	1	–	1	1	–

PROFILO			FLESSIONE			COMPRESSIONE		
W	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
W 100 x 100 x 19.3	201	243	1	1	–	1	1	–
W 130 x 130 x 23.8	201	243	1	1	–	1	1	–
W 130 x 130 x 28.1	172	208	1	1	–	1	1	–
W 150 x 100 x 13.5	336	393	1	3	–	1	3	–
W 150 x 100 x 18.0	253	297	1	1	–	1	1	–
W 150 x 100 x 24.0	197	231	1	1	–	1	1	–
W 150 x 150 x 22.5	259	313	3	3	4	3	3	4
W 150 x 150 x 29.8	198	238	1	2	3	1	2	3
W 150 x 150 x 37.1	160	193	1	1	1	1	1	1

VALORI DEI FATTORI DI SEZIONE E CLASSI DI DUTTILITÀ DI PROFILATI LAMINATI

PROFILO			FLESSIONE			COMPRESSIONE		
W	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
W 200 x 100 x 15.0	354	406	1	3	–	3	4	–
W 200 x 100 x 19.3	276	317	1	1	–	1	2	–
W 200 x 100 x 22.5	241	277	1	1	–	1	2	–
W 200 x 135 x 26.6	232	271	1	1	3	1	2	4
W 200 x 135 x 31.3	199	233	1	1	1	1	2	2
W 200 x 165 x 35.9	190	226	1	1	3	1	1	3
W 200 x 165 x 41.7	165	196	1	1	1	1	1	1
W 200 x 200 x 46.1	168	202	1	3	3	1	3	3
W 200 x 200 x 52	149	180	1	1	3	1	1	3
W 200 x 200 x 59	132	159	1	1	2	1	1	2
W 200 x 200 x 71	111	134	1	1	1	1	1	1
W 200 x 200 x 86	93	112	1	1	1	1	1	1
W 200 x 200 x 100	82	99	1	1	1	1	1	1
W 250 x 100 x 17.9	342	386	1	3	–	4	4	–
W 250 x 100 x 22.3	275	311	1	1	–	3	4	–
W 250 x 100 x 25.3	246	277	1	1	–	2	4	–
W 250 x 100 x 28.4	221	249	1	1	–	2	4	–
W 250 x 145 x 32.7	222	257	1	1	–	2	4	–
W 250 x 145 x 38.5	190	220	1	1	–	2	3	–
W 250 x 145 x 44.8	165	191	1	1	–	1	2	–
W 250 x 200 x 49.1	169	201	1	3	–	1	3	–
W 250 x 200 x 58	145	172	1	1	–	1	1	–
W 250 x 200 x 67	127	151	1	1	–	1	1	–
W 250 x 250 x 73	132	159	1	2	3	1	2	3
W 250 x 250 x 80	121	146	1	2	3	1	2	3
W 250 x 250 x 89	109	132	1	1	2	1	1	2
W 250 x 250 x 101	97	117	1	1	1	1	1	1
W 250 x 250 x 115	87	104	1	1	1	1	1	1
W 250 x 250 x 131	77	92	1	1	1	1	1	1
W 250 x 250 x 149	68	82	1	1	1	1	1	1
W 250 x 250 x 167	62	74	1	1	1	1	1	1
W 310 x 100 x 21.0	329	367	1	2	–	4	4	–
W 310 x 100 x 23.8	292	326	1	1	–	4	4	–
W 310 x 100 x 28.3	249	277	1	1	–	4	4	–
W 310 x 100 x 32.7	216	241	1	1	–	3	4	–
W 310 x 165 x 38.7	220	253	1	2	–	4	4	–
W 310 x 165 x 44.5	193	222	1	1	–	3	4	–
W 310 x 165 x 52	166	191	1	1	–	2	4	–
W 310 x 200 x 60	155	182	1	1	–	1	3	–
W 310 x 200 x 67	139	163	1	1	–	1	2	–
W 310 x 200 x 74	126	148	1	1	–	1	1	–
W 310 x 250 x 79	132	157	1	2	–	1	2	–
W 310 x 250 x 86	121	145	1	1	–	1	2	–
W 310 x 310 x 97	120	145	1	3	3	1	3	3
W 310 x 310 x 107	110	132	1	3	3	1	3	3
W 310 x 310 x 117	100	121	1	2	3	1	2	3
W 310 x 310 x 129	91	110	1	1	2	1	1	2
W 310 x 310 x 143	83	100	1	1	1	1	1	1
W 310 x 310 x 158	76	92	1	1	1	1	1	1
W 310 x 310 x 179	68	82	1	1	1	1	1	1
W 310 x 310 x 202	60	73	1	1	1	1	1	1
W 310 x 310 x 226	55	66	1	1	1	1	1	1
W 310 x 310 x 253	49	59	1	1	1	1	1	1
W 310 x 310 x 283	45	54	1	1	1	1	1	1

PROFILO			FLESSIONE			COMPRESSIONE		
W	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
W 310 x 310 x 313	41	49	1	1	1	1	1	1
W 310 x 310 x 342	38	45	1	1	1	1	1	1
W 360 x 130 x 32.9	252	282	1	1	–	4	4	–
W 360 x 130 x 39.0	213	238	1	1	–	4	4	–
W 360 x 170 x 44	207	237	1	2	–	4	4	–
W 360 x 170 x 51	185	211	1	1	–	4	4	–
W 360 x 170 x 57.8	166	190	1	1	–	3	4	–
W 360 x 200 x 64	154	179	1	1	–	2	4	–
W 360 x 200 x 72	139	161	1	1	–	2	3	–
W 360 x 200 x 79+	126	147	1	1	–	1	2	–
W 360 x 250 x 91	123	145	1	1	–	1	2	–
W 360 x 250 x 101	111	131	1	1	–	1	2	–
W 360 x 250 x 110	103	121	1	1	–	1	1	–
W 360 x 250 x 122	94	110	1	1	–	1	1	–
W 360 x 370 x 134	104	125	2	3	3	2	3	3
W 360 x 370 x 147	95	114	1	3	3	1	3	3
W 360 x 370 x 162	87	105	1	2	3	1	2	3
W 360 x 370 x 179	79	95	1	1	2	1	1	2
W 360 x 370 x 196	72	87	1	1	1	1	1	1
W 360 x 410 x 216	68	82	1	1	1	1	1	1
W 360 x 410 x 237	63	76	1	1	1	1	1	1
W 360 x 410 x 262	57	69	1	1	1	1	1	1
W 360 x 410 x 287	52	63	1	1	1	1	1	1
W 360 x 410 x 314	48	58	1	1	1	1	1	1
W 360 x 410 x 347	44	53	1	1	1	1	1	1
W 360 x 410 x 382	40	49	1	1	1	1	1	1
W 360 x 410 x 421	37	45	1	1	1	1	1	1
W 360 x 410 x 463	34	41	1	1	1	1	1	1
W 360 x 410 x 509	31	38	1	1	1	1	1	1
W 360 x 410 x 551	29	35	1	1	1	1	1	1
W 360 x 410 x 592	28	33	1	1	1	1	1	1
W 360 x 410 x 634	26	31	1	1	1	1	1	1
W 360 x 410 x 677	25	30	1	1	1	1	1	1
W 360 x 410 x 744	23	27	1	1	1	1	1	1
W 360 x 410 x 818	21	25	1	1	1	1	1	1
W 360 x 410 x 900	19	23	1	1	1	1	1	1
W 360 x 410 x 990	18	22	1	1	1	1	1	1
W 360 x 410 x 1086	17	20	1	1	1	1	1	1
W 410 x 140 x 38.8	239	267	1	1	–	4	4	–
W 410 x 140 x 46.1	203	227	1	1	–	4	4	–
W 410 x 180 x 53	192	218	1	1	3	4	4	4
W 410 x 180 x 60	174	197	1	1	1	4	4	4
W 410 x 180 x 67	154	175	1	1	1	3	4	4
W 410 x 180 x 75	140	159	1	1	1	2	4	4
W 410 x 180 x 85	124	140	1	1	1	2	3	4
W 410 x 260 x 100	124	144	1	1	–	2	4	–
W 410 x 260 x 114	108	126	1	1	–	1	3	–
W 410 x 260 x 132	95	111	1	1	–	1	2	–
W 410 x 260 x 149	85	99	1	1	–	1	1	–
W 460 x 150 x 52	200	223	1	1	2	4	4	4
W 460 x 150 x 60	176	196	1	1	1	4	4	4
W 460 x 150 x 68	154	172	1	1	1	4	4	4
W 460 x 190 x 74	153	173	1	1	1	4	4	4
W 460 x 190 x 82	139	158	1	1	1	3	4	4

VALORI DEI FATTORI DI SEZIONE E CLASSI DI DUTTILITÀ DI PROFILATI LAMINATI

PROFILO			FLESSIONE			COMPRESSIONE		
W	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
W 460 x 190 x 89	129	145	1	1	1	3	4	4
W 460 x 190 x 97	119	135	1	1	1	2	4	4
W 460 x 190 x 106	110	124	1	1	1	1	3	4
W 460 x 280 x 113	120	139	1	1	–	2	4	–
W 460 x 280 x 128	106	124	1	1	–	2	3	–
W 460 x 280 x 144	95	110	1	1	–	1	2	–
W 460 x 280 x 158	87	102	1	1	–	1	2	–
W 460 x 280 x 177	78	91	1	1	–	1	1	–
W 460 x 280 x 193	72	84	1	1	–	1	1	–
W 460 x 280 x 213	66	77	1	1	–	1	1	–
W 460 x 280 x 235	60	70	1	1	–	1	1	–
W 460 x 280 x 260	55	64	1	1	–	1	1	–
W 530 x 165 x 66	180	199	1	1	–	4	4	–
W 530 x 165 x 74	159	176	1	1	–	4	4	–
W 530 x 165 x 85	141	157	1	1	–	4	4	–
W 530 x 210 x 92	140	158	1	1	–	4	4	–
W 530 x 210 x 101	128	145	1	1	–	4	4	–
W 530 x 210 x 109	120	135	1	1	–	3	4	–
W 530 x 210 x 123	107	120	1	1	–	2	4	–
W 530 x 210 x 138	96	108	1	1	–	1	3	–
W 530 x 315 x 150	103	119	1	1	–	2	4	–
W 530 x 315 x 165	94	109	1	1	–	2	3	–
W 530 x 315 x 182	86	99	1	1	–	1	3	–
W 530 x 315 x 196	80	92	1	1	–	1	2	–
W 530 x 315 x 219	72	84	1	1	–	1	1	–
W 530 x 315 x 248	64	74	1	1	–	1	1	–
W 530 x 315 x 272	59	68	1	1	–	1	1	–
W 530 x 315 x 300	54	62	1	1	–	1	1	–
W 610 x 180 x 82	162	179	1	1	–	4	4	–
W 610 x 180 x 92	145	160	1	1	–	4	4	–
W 610 x 230 x 101	142	160	1	1	–	4	4	–
W 610 x 230 x 113	128	144	1	1	–	4	4	–
W 610 x 230 x 125	117	131	1	1	1	4	4	4
W 610 x 230 x 140	105	118	1	1	1	3	4	4
W 610 x 230 x 153	97	108	1	1	1	3	4	4
W 610 x 325 x 155	109	125	1	2	3	4	4	4
W 610 x 325 x 174	97	112	1	1	2	3	4	4
W 610 x 325 x 195	87	100	1	1	1	2	4	4
W 610 x 325 x 217	79	91	1	1	1	2	3	4
W 610 x 325 x 241	73	83	1	1	1	1	3	4
W 610 x 325 x 262	66	76	1	1	1	1	2	3
W 610 x 325 x 285	61	70	1	1	1	1	1	2
W 610 x 325 x 341	52	60	1	1	1	1	1	1
W 610 x 325 x 415	43	50	1	1	1	1	1	1
W 610 x 325 x 455	40	46	1	1	1	1	1	1
W 610 x 325 x 498	37	42	1	1	1	1	1	1
W 610 x 325 x 551	34	39	1	1	1	1	1	1
W 690 x 250 x 125	129	145	1	1	–	4	4	–
W 690 x 250 x 140	117	131	1	1	–	4	4	–
W 690 x 250 x 152	108	121	1	1	1	4	4	4
W 690 x 250 x 170	97	109	1	1	1	4	4	4
W 690 x 250 x 192	87	97	1	1	1	3	4	4
W 760 x 265 x 147	120	134	1	1	–	4	4	–
W 760 x 265 x 161	110	123	1	1	1	4	4	4

PROFILO			FLESSIONE			COMPRESSIONE		
W	(m^{-1})	(m^{-1})	S235	S355	S460	S235	S355	S460
W 760 x 265 x 173	81	93	1	1	1	4	4	4
W 760 x 265 x 185	76	88	1	1	1	4	4	4
W 760 x 265 x 196	72	83	1	1	1	4	4	4
W 760 x 265 x 220	65	74	1	1	1	3	4	4
W 840 x 295 x 176	88	101	1	1	–	4	4	–
W 840 x 295 x 193	80	92	1	1	2	4	4	4
W 840 x 295 x 210	74	85	1	1	1	4	4	4
W 840 x 295 x 226	69	79	1	1	1	4	4	4
W 840 x 295 x 251	63	72	1	1	1	4	4	4
W 920 x 310 x 201	82	94	1	1	–	4	4	–
W 920 x 310 x 223	74	85	1	1	2	4	4	4
W 920 x 310 x 238	70	80	1	1	1	4	4	4
W 920 x 310 x 253	66	76	1	1	1	4	4	4
W 920 x 310 x 271	62	71	1	1	1	4	4	4
W 920 x 310 x 289	59	67	1	1	1	4	4	4
W 920 x 310 x 313	55	62	1	1	1	3	4	4
W 920 x 420 x 345	52	62	1	1	1	4	4	4
W 920 x 420 x 368	49	58	1	1	1	3	4	4
W 920 x 420 x 390	46	55	1	1	1	3	4	4
W 920 x 420 x 420	43	51	1	1	1	2	4	4
W 920 x 420 x 449	41	48	1	1	1	2	4	4
W 920 x 420 x 491	37	44	1	1	1	1	3	4
W 920 x 420 x 537	35	41	1	1	1	1	2	3
W 920 x 420 x 588	32	37	1	1	1	1	1	2
W 920 x 420 x 656	29	34	1	1	1	1	1	2
W 920 x 420 x 725	26	31	1	1	1	1	1	1
W 920 x 420 x 787	25	29	1	1	1	1	1	1
W 920 x 420 x 970	20	24	1	1	1	1	1	1
W 1000 x 300 x 222	79	90	1	1	–	4	4	–
W 1000 x 300 x 249	71	81	1	1	2	4	4	4
W 1000 x 300 x 272	66	74	1	1	2	4	4	4
W 1000 x 300 x 314	57	65	1	1	1	4	4	4
W 1000 x 300 x 350	52	59	1	1	1	3	4	4
W 1000 x 300 x 393	47	53	1	1	1	2	4	4
W 1000 x 300 x 415	44	50	1	1	1	2	3	4
W 1000 x 300 x 438	42	48	1	1	1	1	3	4
W 1000 x 300 x 494	38	43	1	1	1	1	2	3
W 1000 x 300 x 584	33	37	1	1	1	1	1	2
W 1000 x 400 x 296	63	73	1	1	2	4	4	4
W 1000 x 400 x 321	58	68	1	1	2	4	4	4
W 1000 x 400 x 371	51	59	1	1	1	4	4	4
W 1000 x 400 x 412	46	54	1	1	1	3	4	4
W 1000 x 400 x 443	43	50	1	1	1	2	4	4
W 1000 x 400 x 483	40	46	1	1	1	2	4	4
W 1000 x 400 x 539	36	42	1	1	1	1	2	4
W 1000 x 400 x 554	35	41	1	1	1	1	2	3
W 1000 x 400 x 591	33	38	1	1	1	1	2	3
W 1000 x 400 x 642	31	36	1	1	1	1	1	2
W 1000 x 400 x 748	27	31	1	1	1	1	1	1
W 1000 x 400 x 883	23	27	1	1	–	1	1	–
W 1100 x 400 x 343	59	68	1	1	2	4	4	4
W 1100 x 400 x 390	52	60	1	1	1	4	4	4
W 1100 x 400 x 433	47	55	1	1	1	4	4	4
W 1100 x 400 x 499	42	48	1	1	1	2	4	4