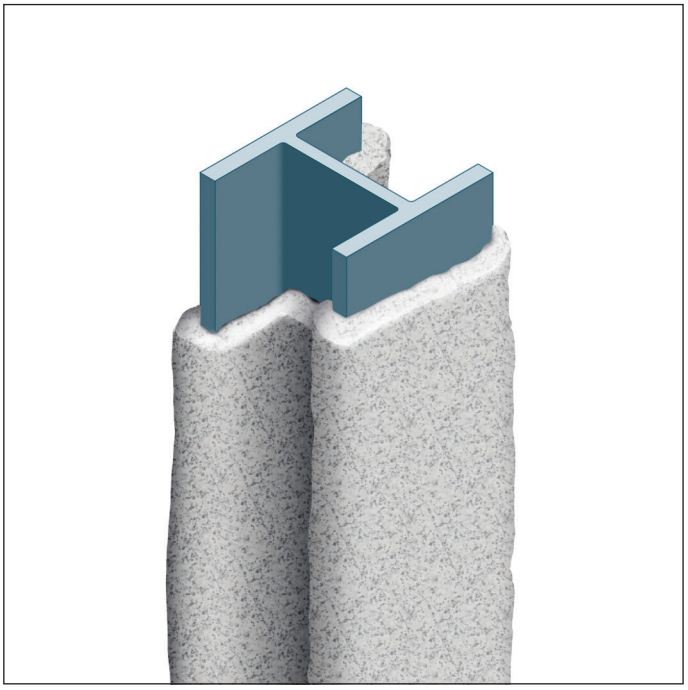
PILASTRI E TRAVI IN ACCIAIO



REAZIONE AL FUOCO: A1

RESISTENZA AL FUOCO: R15-240

- **Supporto:** pilastri e travi in acciaio
- **Rivestimento protettivo:** INTONACO F62 SUPER SPRAY (vedi tabelle)
- **Applicazione:** con intonacatrice meccanica
- **Finitura:** può essere verniciato con pitture di tipo acrilico o vinilico (non necessario ai fini antincendio)

Rapporto di classificazione: ETA 21/0693
Norma di prova: EN 13381-4

Descrizione di capitolato

Fornitura e posa in opera di protezione di pilastri e travi in acciaio con resistenza al fuoco R 15/30/60/90/120/180/240 in classe di reazione al fuoco A1 realizzata con intonaco leggero F62 SUPER SPRAY premiscelato a base di gesso e leganti speciali con densità in polvere di 350 kg/m^3 con applicazione a spruzzo.
L'intonaco è privo di fibre.

Lo spessore della protezione sarà determinato in funzione del fattore di massività delle strutture e della temperatura critica richiesta dalle condizioni di carico in base a prove sperimentali condotte ai sensi della norma EN 13381-4.
Per le modalità di applicazione si veda apposito "manuale di posa".

PILASTRI DI ACCIAIO CON 4 O MENO FACCE ESPOSTE

Spessore minimo (in millimetri) di intonaco F62 SUPER SPRAY in funzione della temperatura critica $\theta_{a,cr}$



PILASTRI

TEMPERATURA CRITICA $\theta_{a,cr}$ 350°C								
Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	9	9	9	9	10	15	25	---
70	9	9	9	9	10	15	26	---
80	9	9	9	9	11	16	26	---
90	9	9	9	9	12	17	27	---
100	9	9	9	9	12	18	28	---
110	9	9	9	10	13	19	28	---
120	9	9	9	10	13	20	29	---
130	9	9	9	10	14	21	30	---
140	9	9	9	10	14	22	31	---
150	9	9	9	10	15	24	31	---
160	9	9	9	10	16	25	32	---
170	9	9	9	11	16	25	33	---
180	9	9	9	11	17	25	34	---
190	9	9	9	11	17	26	34	---
200	9	9	9	11	18	26	35	---
210	9	9	9	12	18	26	36	---
220	9	9	10	12	19	26	38	---
230	9	9	10	12	19	26	40	---
240	9	9	10	12	19	27	41	---
250	9	9	10	13	20	27	---	---
260	9	9	10	13	20	27	---	---
270	9	9	11	13	20	27	---	---
280	9	9	11	13	21	28	---	---
290	9	9	11	13	21	28	---	---
300	9	9	11	14	21	28	---	---
310	9	9	11	14	21	29	---	---
320	9	9	12	14	22	29	---	---
330	9	9	12	14	22	29	---	---
340	9	9	12	14	22	29	---	---
350	9	9	12	15	22	29	---	---
360	9	9	12	15	23	30	---	---
370	9	9	12	15	23	30	---	---
380	9	9	13	15	23	30	---	---
390	9	9	13	16	24	30	---	---
400	9	9	13	16	24	31	---	---
410	9	9	13	16	24	31	---	---
420	9	9	13	16	24	31	---	---
430	9	9	14	16	25	31	---	---
440	9	9	14	17	25	32	---	---
450	9	9	14	17	25	32	---	---
460	9	9	14	17	26	32	---	---
470	9	9	14	17	26	32	---	---
475	9	9	14	18	26	32	---	---

TEMPERATURA CRITICA $\theta_{a,cr}$ 500°C								
Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	9	9	9	9	9	10	17	26
70	9	9	9	9	9	10	18	27
80	9	9	9	9	9	11	20	28
90	9	9	9	9	9	12	21	30
100	9	9	9	9	10	12	23	32
110	9	9	9	9	10	13	25	33
120	9	9	9	9	10	14	25	35
130	9	9	9	9	11	15	25	38
140	9	9	9	9	11	16	26	41
150	9	9	9	9	12	16	26	---
160	9	9	9	9	12	17	26	---
170	9	9	9	9	12	18	27	---
180	9	9	9	9	13	19	27	---
190	9	9	9	9	13	20	27	---
200	9	9	9	9	13	20	28	---
210	9	9	9	10	14	21	28	---
220	9	9	9	10	14	22	28	---
230	9	9	9	10	15	22	29	---
240	9	9	9	10	15	23	29	---
250	9	9	9	10	15	23	29	---
260	9	9	9	11	16	24	29	---
270	9	9	9	11	16	25	30	---
280	9	9	9	11	17	25	30	---
290	9	9	9	11	17	25	30	---
300	9	9	9	12	17	25	31	---
310	9	9	9	12	18	26	31	---
320	9	9	9	12	18	26	31	---
330	9	9	9	12	18	26	32	---
340	9	9	9	12	19	26	32	---
350	9	9	9	13	19	27	32	---
360	9	9	9	13	19	27	33	---
370	9	9	9	13	20	27	33	---
380	9	9	9	13	20	27	33	---
390	9	9	9	13	21	28	33	---
400	9	9	9	14	21	28	34	---
410	9	9	9	14	21	28	34	---
420	9	9	9	14	22	28	34	---
430	9	9	10	14	22	29	35	---
440	9	9	10	14	22	29	35	---
450	9	9	10	15	23	29	35	---
460	9	9	10	15	23	29	36	---
470	9	9	10	15	23	30	37	---
475	9	9	11	15	24	30	37	---

PILASTRI DI ACCIAIO CON 4 O MENO FACCE ESPOSTE

Spessore minimo (in millimetri) di intonaco F62 SUPER SPRAY in funzione della temperatura critica $\theta_{a,cr}$



PILASTRI

TEMPERATURA CRITICA $\theta_{a,cr}$ 550°C

Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	9	9	9	9	9	9	16	24
70	9	9	9	9	9	9	16	24
80	9	9	9	9	9	10	18	26
90	9	9	9	9	9	10	19	27
100	9	9	9	9	9	11	21	29
110	9	9	9	9	9	12	23	31
120	9	9	9	9	10	13	24	33
130	9	9	9	9	10	13	25	34
140	9	9	9	9	10	14	25	36
150	9	9	9	9	11	15	26	39
160	9	9	9	9	11	15	26	41
170	9	9	9	9	11	16	26	---
180	9	9	9	9	12	17	27	---
190	9	9	9	9	12	18	27	---
200	9	9	9	9	12	18	27	---
210	9	9	9	9	13	19	28	---
220	9	9	9	9	13	20	28	---
230	9	9	9	9	13	20	28	---
240	9	9	9	9	14	21	28	---
250	9	9	9	9	14	21	29	---
260	9	9	9	9	14	22	29	---
270	9	9	9	10	15	22	29	---
280	9	9	9	10	15	23	30	---
290	9	9	9	10	15	23	30	---
300	9	9	9	10	16	24	30	---
310	9	9	9	11	16	24	31	---
320	9	9	9	11	16	25	31	---
330	9	9	9	11	17	25	31	---
340	9	9	9	11	17	25	32	---
350	9	9	9	11	17	26	32	---
360	9	9	9	12	18	26	32	---
370	9	9	9	12	18	26	32	---
380	9	9	9	12	19	26	33	---
390	9	9	9	12	19	27	33	---
400	9	9	9	13	19	27	33	---
410	9	9	9	13	20	27	34	---
420	9	9	9	13	20	27	34	---
430	9	9	9	13	21	28	34	---
440	9	9	9	14	21	28	34	---
450	9	9	9	14	21	28	35	---
460	9	9	9	14	22	28	35	---
470	9	9	9	14	22	29	36	---
475	9	9	9	14	22	29	36	---

TEMPERATURA CRITICA $\theta_{a,cr}$ 600°C

Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	9	9	9	9	9	9	14	21
70	9	9	9	9	9	9	14	21
80	9	9	9	9	9	9	16	23
90	9	9	9	9	9	10	17	25
100	9	9	9	9	9	10	19	27
110	9	9	9	9	9	11	20	28
120	9	9	9	9	9	11	22	30
130	9	9	9	9	9	12	23	31
140	9	9	9	9	10	13	25	32
150	9	9	9	9	10	13	25	34
160	9	9	9	9	10	14	25	35
170	9	9	9	9	11	14	26	37
180	9	9	9	9	11	15	26	39
190	9	9	9	9	11	15	26	41
200	9	9	9	9	11	16	27	---
210	9	9	9	9	12	17	27	---
220	9	9	9	9	12	17	27	---
230	9	9	9	9	12	18	27	---
240	9	9	9	9	13	18	28	---
250	9	9	9	9	13	18	28	---
260	9	9	9	9	13	19	28	---
270	9	9	9	9	13	19	29	---
280	9	9	9	9	14	20	29	---
290	9	9	9	9	14	20	29	---
300	9	9	9	9	14	20	30	---
310	9	9	9	9	15	21	30	---
320	9	9	9	9	15	21	30	---
330	9	9	9	9	15	22	31	---
340	9	9	9	10	15	22	31	---
350	9	9	9	10	16	22	31	---
360	9	9	9	10	16	23	31	---
370	9	9	9	10	16	23	32	---
380	9	9	9	11	16	24	32	---
390	9	9	9	11	17	24	32	---
400	9	9	9	11	17	24	32	---
410	9	9	9	11	17	25	33	---
420	9	9	9	12	18	25	33	---
430	9	9	9	12	18	25	33	---
440	9	9	9	12	19	26	34	---
450	9	9	9	12	19	26	34	---
460	9	9	9	13	20	26	34	---
470	9	9	9	13	20	27	35	---
475	9	9	9	13	20	27	35	---

PILASTRI DI ACCIAIO CON 4 O MENO FACCE ESPOSTE

Spessore minimo (in millimetri) di intonaco F62 SUPER SPRAY in funzione della temperatura critica $\theta_{a,cr}$



PILASTRI

TEMPERATURA CRITICA $\theta_{a,cr}$ 650°C

Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	9	9	9	9	9	9	13	19
70	9	9	9	9	9	9	13	19
80	9	9	9	9	9	9	14	21
90	9	9	9	9	9	9	16	24
100	9	9	9	9	9	9	17	25
110	9	9	9	9	9	10	18	26
120	9	9	9	9	9	10	19	26
130	9	9	9	9	9	11	21	27
140	9	9	9	9	9	11	22	28
150	9	9	9	9	9	12	23	28
160	9	9	9	9	10	12	25	29
170	9	9	9	9	10	13	25	29
180	9	9	9	9	10	13	25	30
190	9	9	9	9	10	14	26	31
200	9	9	9	9	11	14	26	31
210	9	9	9	9	11	15	26	32
220	9	9	9	9	11	15	26	33
230	9	9	9	9	11	16	27	33
240	9	9	9	9	12	16	27	34
250	9	9	9	9	12	17	27	34
260	9	9	9	9	12	17	27	35
270	9	9	9	9	12	18	28	36
280	9	9	9	9	13	18	28	37
290	9	9	9	9	13	18	28	39
300	9	9	9	9	13	18	28	40
310	9	9	9	9	13	19	29	41
320	9	9	9	9	14	19	29	---
330	9	9	9	9	14	19	29	---
340	9	9	9	9	14	19	29	---
350	9	9	9	9	14	20	29	---
360	9	9	9	9	15	20	30	---
370	9	9	9	9	15	20	30	---
380	9	9	9	9	15	21	30	---
390	9	9	9	9	16	21	31	---
400	9	9	9	9	16	21	31	---
410	9	9	9	9	16	21	31	---
420	9	9	9	9	16	22	31	---
430	9	9	9	9	17	22	32	---
440	9	9	9	10	17	22	32	---
450	9	9	9	10	17	22	32	---
460	9	9	9	10	17	23	32	---
470	9	9	9	10	18	23	33	---
475	9	9	9	10	18	23	33	---

TEMPERATURA CRITICA $\theta_{a,cr}$ 700°C

Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	9	9	9	9	9	9	10	17
70	9	9	9	9	9	9	10	17
80	9	9	9	9	9	9	11	19
90	9	9	9	9	9	9	13	22
100	9	9	9	9	9	9	14	24
110	9	9	9	9	9	9	15	25
120	9	9	9	9	9	10	17	26
130	9	9	9	9	9	10	18	26
140	9	9	9	9	9	10	19	27
150	9	9	9	9	9	11	21	27
160	9	9	9	9	9	11	22	28
170	9	9	9	9	9	12	24	29
180	9	9	9	9	9	12	25	29
190	9	9	9	9	9	13	25	30
200	9	9	9	9	10	13	26	30
210	9	9	9	9	10	13	26	31
220	9	9	9	9	10	14	26	31
230	9	9	9	9	10	14	26	32
240	9	9	9	9	11	15	27	33
250	9	9	9	9	11	15	27	33
260	9	9	9	9	11	15	27	34
270	9	9	9	9	11	16	27	34
280	9	9	9	9	12	16	28	35
290	9	9	9	9	12	17	28	36
300	9	9	9	9	12	17	28	37
310	9	9	9	9	12	18	28	37
320	9	9	9	9	13	18	29	38
330	9	9	9	9	13	18	29	39
340	9	9	9	9	13	19	29	40
350	9	9	9	9	13	19	30	---
360	9	9	9	9	14	20	30	---
370	9	9	9	9	14	20	30	---
380	9	9	9	9	14	21	30	---
390	9	9	9	9	14	21	31	---
400	9	9	9	9	15	22	31	---
410	9	9	9	9	15	22	31	---
420	9	9	9	9	15	22	31	---
430	9	9	9	9	16	23	32	---
440	9	9	9	9	16	23	32	---
450	9	9	9	9	16	23	32	---
460	9	9	9	9	16	24	33	---
470	9	9	9	9	17	24	33	---
475	9	9	9	9	17	25	33	---

PILASTRI DI ACCIAIO CON 4 O MENO FACCE ESPOSTE

Spessore minimo (in millimetri) di intonaco F62 SUPER SPRAY in funzione della temperatura critica $\theta_{a,cr}$



PILASTRI

TEMPERATURA CRITICA $\theta_{a,cr}$ 750°C								
Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	9	9	9	9	9	9	9	14
70	9	9	9	9	9	9	9	14
80	9	9	9	9	9	9	9	17
90	9	9	9	9	9	9	10	19
100	9	9	9	9	9	9	12	21
110	9	9	9	9	9	9	13	23
120	9	9	9	9	9	9	14	25
130	9	9	9	9	9	9	15	25
140	9	9	9	9	9	9	16	26
150	9	9	9	9	9	10	18	26
160	9	9	9	9	9	10	19	27
170	9	9	9	9	9	10	20	27
180	9	9	9	9	9	11	21	28
190	9	9	9	9	9	11	22	28
200	9	9	9	9	9	11	23	28
210	9	9	9	9	9	12	25	29
220	9	9	9	9	9	12	25	29
230	9	9	9	9	9	13	25	30
240	9	9	9	9	9	13	26	30
250	9	9	9	9	9	13	26	31
260	9	9	9	9	10	14	26	31
270	9	9	9	9	10	14	26	32
280	9	9	9	9	10	14	27	32
290	9	9	9	9	10	15	27	32
300	9	9	9	9	11	15	27	33
310	9	9	9	9	11	15	27	33
320	9	9	9	9	11	16	28	34
330	9	9	9	9	11	16	28	34
340	9	9	9	9	12	16	28	35
350	9	9	9	9	12	17	28	35
360	9	9	9	9	12	17	29	36
370	9	9	9	9	12	17	29	37
380	9	9	9	9	13	18	29	38
390	9	9	9	9	13	18	29	39
400	9	9	9	9	13	19	30	39
410	9	9	9	9	13	19	30	40
420	9	9	9	9	14	20	30	41
430	9	9	9	9	14	20	30	---
440	9	9	9	9	14	21	31	---
450	9	9	9	9	15	21	31	---
460	9	9	9	9	15	22	31	---
470	9	9	9	9	15	22	31	---
475	9	9	9	9	15	22	31	---

TRAVI DI ACCIAIO CON 3 O MENO FACCE ESPOSTE

Spessore minimo (in millimetri) di intonaco F62 SUPER SPRAY in funzione della temperatura critica $\theta_{a,cr}$



TRAVI

TEMPERATURA CRITICA $\theta_{a,cr}$ 350°C

Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	10	10	10	10	10	15	25	---
70	10	10	10	10	10	15	26	---
80	10	10	10	10	11	16	26	---
90	10	10	10	10	12	17	27	---
100	10	10	10	10	12	18	28	---
110	10	10	10	10	13	19	28	---
120	10	10	10	10	13	20	29	---
130	10	10	10	10	14	21	30	---
140	10	10	10	10	14	22	31	---
150	10	10	10	10	15	24	31	---
160	10	10	10	10	16	25	32	---
170	10	10	10	11	16	25	33	---
180	10	10	10	11	17	25	34	---
190	10	10	10	11	17	26	34	---
200	10	10	10	11	18	26	35	---
210	10	10	10	12	18	26	36	---
220	10	10	10	12	19	26	38	---
230	10	10	10	12	19	26	40	---
240	10	10	10	12	19	27	41	---
250	10	10	10	13	20	27	---	---
260	10	10	10	13	20	27	---	---
270	10	10	11	13	20	27	---	---
280	10	10	11	13	21	28	---	---
290	10	10	11	13	21	28	---	---
300	10	10	11	14	21	28	---	---
310	10	10	11	14	21	29	---	---
320	10	10	12	14	22	29	---	---
330	10	10	12	14	22	29	---	---
340	10	10	12	14	22	29	---	---
350	10	10	12	15	22	29	---	---
360	10	10	12	15	23	30	---	---
370	10	10	12	15	23	30	---	---
380	10	10	13	15	23	30	---	---
390	10	10	13	16	24	30	---	---
400	10	10	13	16	24	31	---	---
410	10	10	13	16	24	31	---	---
420	10	10	13	16	24	31	---	---
430	10	10	14	16	25	31	---	---
440	10	10	14	17	25	32	---	---
450	10	10	14	17	25	32	---	---
460	10	10	14	17	26	32	---	---
470	10	10	14	17	26	32	---	---
475	10	10	14	18	26	32	---	---

TEMPERATURA CRITICA $\theta_{a,cr}$ 500°C

Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	10	10	10	10	10	10	17	26
70	10	10	10	10	10	10	18	27
80	10	10	10	10	10	11	20	28
90	10	10	10	10	10	12	21	30
100	10	10	10	10	10	12	23	32
110	10	10	10	10	10	13	25	33
120	10	10	10	10	10	14	25	35
130	10	10	10	10	11	15	25	38
140	10	10	10	10	11	16	26	41
150	10	10	10	10	12	16	26	---
160	10	10	10	10	12	17	26	---
170	10	10	10	10	12	18	27	---
180	10	10	10	10	13	19	27	---
190	10	10	10	10	13	20	27	---
200	10	10	10	10	13	20	28	---
210	10	10	10	10	14	21	28	---
220	10	10	10	10	14	22	28	---
230	10	10	10	10	15	22	29	---
240	10	10	10	10	15	23	29	---
250	10	10	10	10	15	23	29	---
260	10	10	10	11	16	24	29	---
270	10	10	10	11	16	25	30	---
280	10	10	10	11	17	25	30	---
290	10	10	10	11	17	25	30	---
300	10	10	10	12	17	25	31	---
310	10	10	10	12	18	26	31	---
320	10	10	10	12	18	26	31	---
330	10	10	10	12	18	26	32	---
340	10	10	10	12	19	26	32	---
350	10	10	10	13	19	27	32	---
360	10	10	10	13	19	27	33	---
370	10	10	10	13	20	27	33	---
380	10	10	10	13	20	27	33	---
390	10	10	10	13	21	28	33	---
400	10	10	10	14	21	28	34	---
410	10	10	10	14	21	28	34	---
420	10	10	10	14	22	28	34	---
430	10	10	10	14	22	29	35	---
440	10	10	10	14	22	29	35	---
450	10	10	10	15	23	29	35	---
460	10	10	10	15	23	29	36	---
470	10	10	10	15	23	30	37	---
475	10	10	11	15	24	30	37	---

TRAVI DI ACCIAIO CON 3 O MENO FACCE ESPOSTE

Spessore minimo (in millimetri) di intonaco F62 SUPER SPRAY in funzione della temperatura critica $\theta_{a,cr}$



TRAVI

TEMPERATURA CRITICA $\theta_{a,cr}$ 550°C

Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	10	10	10	10	10	10	16	24
70	10	10	10	10	10	10	16	24
80	10	10	10	10	10	10	18	26
90	10	10	10	10	10	10	19	27
100	10	10	10	10	10	11	21	29
110	10	10	10	10	10	12	23	31
120	10	10	10	10	10	13	24	33
130	10	10	10	10	10	13	25	34
140	10	10	10	10	10	14	25	36
150	10	10	10	10	11	15	26	39
160	10	10	10	10	11	15	26	41
170	10	10	10	10	11	16	26	---
180	10	10	10	10	12	17	27	---
190	10	10	10	10	12	18	27	---
200	10	10	10	10	12	18	27	---
210	10	10	10	10	13	19	28	---
220	10	10	10	10	13	20	28	---
230	10	10	10	10	13	20	28	---
240	10	10	10	10	14	21	28	---
250	10	10	10	10	14	21	29	---
260	10	10	10	10	14	22	29	---
270	10	10	10	10	15	22	29	---
280	10	10	10	10	15	23	30	---
290	10	10	10	10	15	23	30	---
300	10	10	10	10	16	24	30	---
310	10	10	10	11	16	24	31	---
320	10	10	10	11	16	25	31	---
330	10	10	10	11	17	25	31	---
340	10	10	10	11	17	25	32	---
350	10	10	10	11	17	26	32	---
360	10	10	10	12	18	26	32	---
370	10	10	10	12	18	26	32	---
380	10	10	10	12	19	26	33	---
390	10	10	10	12	19	27	33	---
400	10	10	10	13	19	27	33	---
410	10	10	10	13	20	27	34	---
420	10	10	10	13	20	27	34	---
430	10	10	10	13	21	28	34	---
440	10	10	10	14	21	28	34	---
450	10	10	10	14	21	28	35	---
460	10	10	10	14	22	28	35	---
470	10	10	10	14	22	29	36	---
475	10	10	10	14	22	29	36	---

TEMPERATURA CRITICA $\theta_{a,cr}$ 600°C

Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	10	10	10	10	10	10	14	21
70	10	10	10	10	10	10	14	21
80	10	10	10	10	10	10	16	23
90	10	10	10	10	10	10	17	25
100	10	10	10	10	10	10	19	27
110	10	10	10	10	10	11	20	28
120	10	10	10	10	10	11	22	30
130	10	10	10	10	10	12	23	31
140	10	10	10	10	10	13	25	32
150	10	10	10	10	10	13	25	34
160	10	10	10	10	10	14	25	35
170	10	10	10	10	11	14	26	37
180	10	10	10	10	11	15	26	39
190	10	10	10	10	11	15	26	41
200	10	10	10	10	11	16	27	---
210	10	10	10	10	12	17	27	---
220	10	10	10	10	12	17	27	---
230	10	10	10	10	12	18	27	---
240	10	10	10	10	13	18	28	---
250	10	10	10	10	13	18	28	---
260	10	10	10	10	13	19	28	---
270	10	10	10	10	13	19	29	---
280	10	10	10	10	14	20	29	---
290	10	10	10	10	14	20	29	---
300	10	10	10	10	14	20	30	---
310	10	10	10	10	15	21	30	---
320	10	10	10	10	15	21	30	---
330	10	10	10	10	15	22	31	---
340	10	10	10	10	15	22	31	---
350	10	10	10	10	16	22	31	---
360	10	10	10	10	16	23	31	---
370	10	10	10	10	16	23	32	---
380	10	10	10	11	16	24	32	---
390	10	10	10	11	17	24	32	---
400	10	10	10	11	17	24	32	---
410	10	10	10	11	17	25	33	---
420	10	10	10	12	18	25	33	---
430	10	10	10	12	18	25	33	---
440	10	10	10	12	19	26	34	---
450	10	10	10	12	19	26	34	---
460	10	10	10	13	20	26	34	---
470	10	10	10	13	20	27	35	---
475	10	10	10	13	20	27	35	---

TRAVI DI ACCIAIO CON 3 O MENO FACCE ESPOSTE

Spessore minimo (in millimetri) di intonaco F62 SUPER SPRAY in funzione della temperatura critica $\theta_{a,cr}$



TRAVI

TEMPERATURA CRITICA $\theta_{a,cr}$ 650°C								
Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	10	10	10	10	10	10	13	19
70	10	10	10	10	10	10	13	19
80	10	10	10	10	10	10	14	21
90	10	10	10	10	10	10	16	24
100	10	10	10	10	10	10	17	25
110	10	10	10	10	10	10	18	26
120	10	10	10	10	10	10	19	26
130	10	10	10	10	10	11	21	27
140	10	10	10	10	10	11	22	28
150	10	10	10	10	10	12	23	28
160	10	10	10	10	10	12	25	29
170	10	10	10	10	10	13	25	29
180	10	10	10	10	10	13	25	30
190	10	10	10	10	10	14	26	31
200	10	10	10	10	11	14	26	31
210	10	10	10	10	11	15	26	32
220	10	10	10	10	11	15	26	33
230	10	10	10	10	11	16	27	33
240	10	10	10	10	12	16	27	34
250	10	10	10	10	12	17	27	34
260	10	10	10	10	12	17	27	35
270	10	10	10	10	12	18	28	36
280	10	10	10	10	13	18	28	37
290	10	10	10	10	13	18	28	39
300	10	10	10	10	13	18	28	40
310	10	10	10	10	13	19	29	41
320	10	10	10	10	14	19	29	---
330	10	10	10	10	14	19	29	---
340	10	10	10	10	14	19	29	---
350	10	10	10	10	14	20	29	---
360	10	10	10	10	15	20	30	---
370	10	10	10	10	15	20	30	---
380	10	10	10	10	15	21	30	---
390	10	10	10	10	16	21	31	---
400	10	10	10	10	16	21	31	---
410	10	10	10	10	16	21	31	---
420	10	10	10	10	16	22	31	---
430	10	10	10	10	17	22	32	---
440	10	10	10	10	17	22	32	---
450	10	10	10	10	17	22	32	---
460	10	10	10	10	17	23	32	---
470	10	10	10	10	18	23	33	---
475	10	10	10	10	18	23	33	---

TEMPERATURA CRITICA $\theta_{a,cr}$ 700°C								
Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	10	10	10	10	10	10	10	17
70	10	10	10	10	10	10	10	17
80	10	10	10	10	10	10	11	19
90	10	10	10	10	10	10	13	22
100	10	10	10	10	10	10	14	24
110	10	10	10	10	10	10	15	25
120	10	10	10	10	10	10	17	26
130	10	10	10	10	10	10	18	26
140	10	10	10	10	10	10	19	27
150	10	10	10	10	10	11	21	27
160	10	10	10	10	10	11	22	28
170	10	10	10	10	10	12	24	29
180	10	10	10	10	10	12	25	29
190	10	10	10	10	10	13	25	30
200	10	10	10	10	10	13	26	30
210	10	10	10	10	10	13	26	31
220	10	10	10	10	10	14	26	31
230	10	10	10	10	10	14	26	32
240	10	10	10	10	11	15	27	33
250	10	10	10	10	11	15	27	33
260	10	10	10	10	11	15	27	34
270	10	10	10	10	11	16	27	34
280	10	10	10	10	12	16	28	35
290	10	10	10	10	12	17	28	36
300	10	10	10	10	12	17	28	37
310	10	10	10	10	12	18	28	38
320	10	10	10	10	13	18	29	39
330	10	10	10	10	13	18	29	40
340	10	10	10	10	13	19	29	---
350	10	10	10	10	13	19	30	---
360	10	10	10	10	14	20	30	---
370	10	10	10	10	14	20	30	---
380	10	10	10	10	14	21	30	---
390	10	10	10	10	14	21	31	---
400	10	10	10	10	15	22	31	---
410	10	10	10	10	15	22	31	---
420	10	10	10	10	15	22	31	---
430	10	10	10	10	16	23	32	---
440	10	10	10	10	16	23	32	---
450	10	10	10	10	16	23	32	---
460	10	10	10	10	16	24	33	---
470	10	10	10	10	17	24	33	---
475	10	10	10	10	17	25	33	---

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TRAVI DI ACCIAIO CON 3 O MENO FACCE ESPOSTE

Spessore minimo (in millimetri) di intonaco F62 SUPER SPRAY in funzione della temperatura critica $\theta_{a,cr}$



TRAVI

TEMPERATURA CRITICA $\theta_{a,cr}$ 750°C								
Fattore di sezione	Classificazione di resistenza al fuoco							
(m^{-1})	R15	R30	R45	R60	R90	R120	R180	R240
68	10	10	10	10	10	10	10	14
70	10	10	10	10	10	10	10	14
80	10	10	10	10	10	10	10	17
90	10	10	10	10	10	10	10	19
100	10	10	10	10	10	10	12	21
110	10	10	10	10	10	10	13	23
120	10	10	10	10	10	10	14	25
130	10	10	10	10	10	10	15	25
140	10	10	10	10	10	10	16	26
150	10	10	10	10	10	10	18	26
160	10	10	10	10	10	10	19	27
170	10	10	10	10	10	10	20	27
180	10	10	10	10	10	11	21	28
190	10	10	10	10	10	11	22	28
200	10	10	10	10	10	11	23	28
210	10	10	10	10	10	12	25	29
220	10	10	10	10	10	12	25	29
230	10	10	10	10	10	13	25	30
240	10	10	10	10	10	13	26	30
250	10	10	10	10	10	13	26	31
260	10	10	10	10	10	14	26	31
270	10	10	10	10	10	14	26	32
280	10	10	10	10	10	14	27	32
290	10	10	10	10	10	15	27	32
300	10	10	10	10	11	15	27	33
310	10	10	10	10	11	15	27	33
320	10	10	10	10	11	16	28	34
330	10	10	10	10	11	16	28	34
340	10	10	10	10	12	16	28	35
350	10	10	10	10	12	17	28	35
360	10	10	10	10	12	17	29	36
370	10	10	10	10	12	17	29	37
380	10	10	10	10	13	18	29	38
390	10	10	10	10	13	18	29	39
400	10	10	10	10	13	19	30	39
410	10	10	10	10	13	19	30	40
420	10	10	10	10	14	20	30	41
430	10	10	10	10	14	20	30	---
440	10	10	10	10	14	21	31	---
450	10	10	10	10	15	21	31	---
460	10	10	10	10	15	22	31	---
470	10	10	10	10	15	22	31	---
475	10	10	10	10	15	22	31	---

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

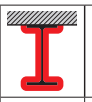
PROFILO			FLESSIONE			COMPRESSIONE		
C	(m-1)	(m-1)	S235	S355	S460	S235	S355	S460
C 75 x 6,1	311	356	1	1	–	1	1	–
C 75 x 7,4	259	298	1	1	–	1	1	–
C 75 x 8,9	219	254	1	1	–	1	1	–
C 100 x 8	301	341	1	1	–	1	1	–
C 100 x 10,8	225	256	1	1	–	1	1	–
C 130 x 10,4	285	320	1	1	–	1	1	–
C 130 x 13	219	247	1	1	–	1	1	–
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

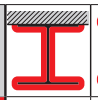
VALORI DEI FATTORI DI SEZIONE E CLASSI DI DUTTILITÀ DI PROFILATI LAMINATI

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

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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

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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