ROMA
INSULATION SYSTEMS

Table of spans

Comments on roof element tables 2
Calculation of snow load 3
Calculation of wind load 4
Roof elements according to the general building authority approval Z-10.4-549
ROMA D 72 TL/ML t_N=0.6/0.5 mm 5
ROMA D 82 TL/ML t_N=0.6/0.5 mm 7
ROMA D 102 TL/ML t_N=0.6/0.5 mm 9
ROMA D 122 TL/ML t_N=0.6/0.5 mm 11
ROMA D 142 TL/ML t_N=0.6/0.5 mm 13
ROMA D 162 TL/ML t_N=0.6/0.5 mm 15
ROMA D 182 TL/ML t_N=0.6/0.5 mm 17

ROMA
INSULATION SYSTEMS

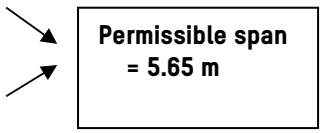
COMMENTS ON THE TABLES FOR ROOF ELEMENTS

When using the tables, the following should be observed:

1. The characteristic loads must be determined in accordance with Eurocodes or, if necessary, taking account of the national appendix.
2. Values in accordance with DIN EN 1990/NA:2010-12 are the basis for load factors and combined coefficients.
3. The general building authority approval Z-10.4-549 of April 2013 serves as the basis for the load bearing capacity and the calculation parameters.
4. The relevant minimum span in the tables for snow load and wind uplift pressure requirements should be selected for each application case.
5. In the case of double- and triple-span girders/beams, only approximately identical span ratios are permissible (approximately 1.0≤ min.l/max. l ≤0.8).
6. Application in buildings with normal interior temperatures of 20 to 25 °C.
7. At most, the deflection amounts to l/100 while considering all unfavourable loads, including long-term behavior, and l/200 in the case of short-term load action.
   Spans in the additional line marked with * are not relevant for calculations where deflection is restricted.
8. Spans in the "Characteristic wind uplift pressure" table do not take fasteners into consideration. Fasteners have to be verified on a case-by-case basis.
9. The quantity of direct fasteners was calculated using a characteristic screw load capacity of $N_{R,k}$ = 2.3 kN.
10. Interpolation between spans and numbers of screws is possible, but extrapolation is not.
11. For indirect (concealed) fastening, load capacity in accordance with approval Z-10.4-549, Appendix 2 is considered.
    For thin walls (t ≤ 5mm), asymmetrical substructures (no symmetrical axis parallel to the screw axis such as with Z or C profiles), a separate structural analysis must be carried out in each individual case.
12. See approval Z-10.4-549 for specific instructions related to load capacity, calculation parameters and their monitoring.
13. Please refer to the Roma color chart for information about surface colors and their category: I (very light), II (light) and III (dark).
14. Permissible spans are listed in m and the required support width in mm; see the following reading example.

READING EXAMPLE

From "Snow load" table	46	Required end support width in millimeters
	5.65	Permissible span based on element verification in m
	92	Required intermediate support width in mm



From "Wind uplift" table	6.05	Permissible span based on element verification
From "Wind uplift" table	3	Number of screws per meter at support
For screws	3.5	Permissible span in m with 3 screws per support

CALCULATING SNOW LOAD

Source: www.schneelast.info

Table 1: Characteristic snow load (kN/m²)

SNOW LOAD ZONE	Snow load on the ground (kN/m²)	
1	0.19 +0.91*[(A+140)/760]²	≥0.65 (≤ 400 m above sea level)
2	0.25+1.91*[(A+140)/760]²	0.85 (≤ 285 m above sea level)
3	0.31+2.91*[(A+140)/760]²	≥1.10 (≤ 255 m above sea level)

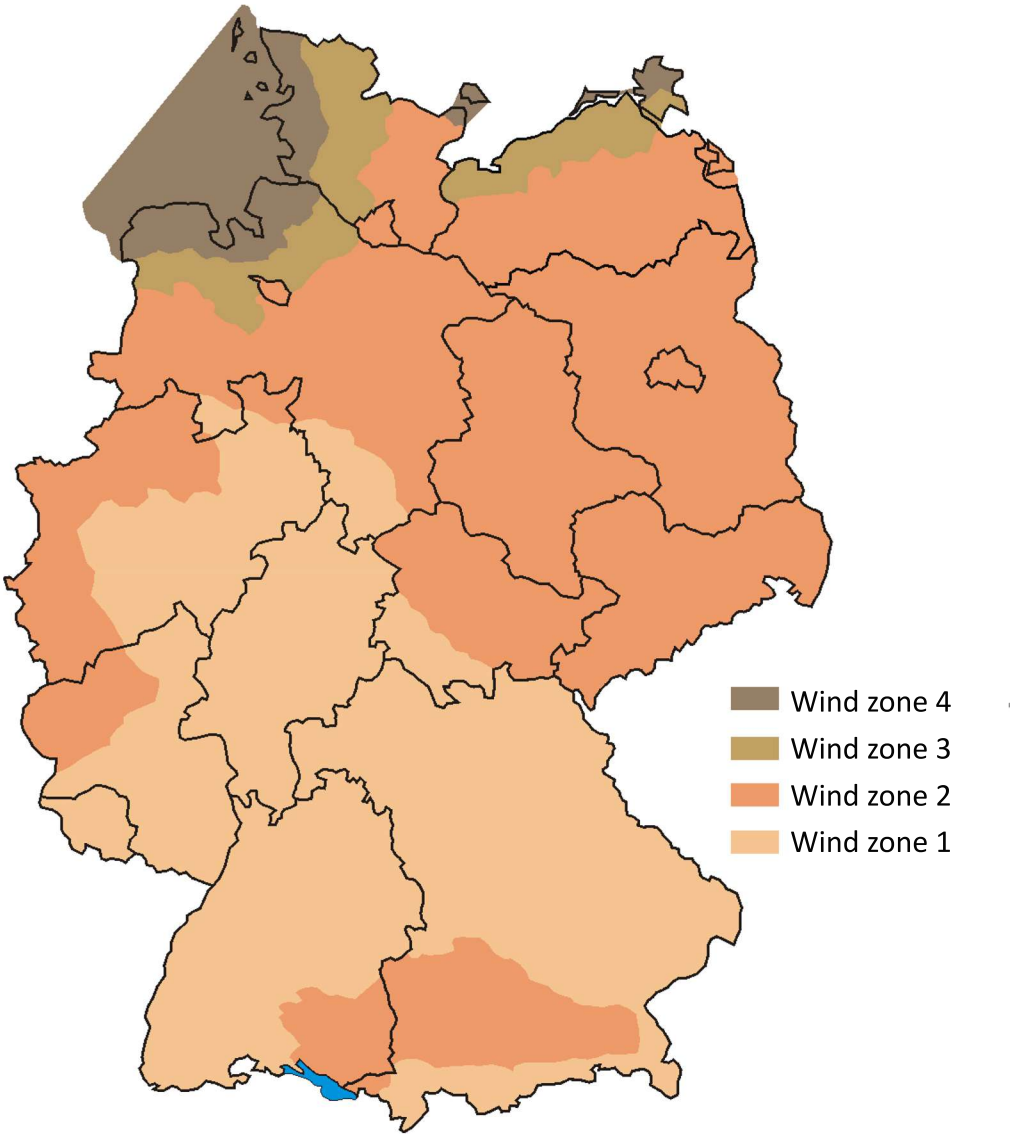
A= height of the building site above sea level

Note 1: *For zones 1a and 2a, the values for zones 1 and 2 are multiplied by* **1.25.**

Note 2: *Accounting for the roof type coefficients:* $s_i=\mu_1 * s_k$; μ_1**=0.8**

Example: *86647 Buttenwiesen snow load zone 1a: A= 425 m above sea level:*
Table 1: $0.19 +0.91*[(425+140)/760]^2 = \underline{0.69\ kN/m^2}$ *≥0.65 kN/m²*
Note 1: $1.25 * 0.69\ kN/m^2 = 0.866\ kN/m^2$
Note 2: *Accounting for the roof type coefficient:* $0.8 * 0.66\ kN/m^2 = 0.693\ kN/m^2$
Tabulated value: = 0.693 kN/m²

CALCULATION OF WIND LOAD



Source: http://de.wikipedia.org/wiki/windlast

Table 2: Characteristic wind uplift pressure load (kN/m²)

Building height		WIND LOAD ZONE			
		1	2	3	4
5 m	PERIPHERAL AREA	-1.01/-1.25	-1.32/-1.61	-1.59/-1.59	-1.89/-2.31
	NORMAL AREA	-0.29/-0.59	-0.41/-0.70	-0.49/-0.85	-0.59/-1.01
10 m	PERIPHERAL AREA	-1.22/-1.50	-1.49/-1.82	-1.80/-2.20	-2.14/-2.62
	NORMAL AREA	-0.38/-0.65	-0.46/-0.80	-0.56/-0.96	-0.67/1.14
15 m	PERIPHERAL AREA	-1.42/-1.74	-1.73/-2.12	-2.09/-2.55	-2.49/-3.04
	NORMAL AREA	-0.44/-0.76	-0.54/-0.92	-0.65/-1.11	-0.66/-0.94

Note 3: *Example values for buildings in the onshore terrain category (general wind uplift pressure/wind uplift pressure for screws)*

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 072 TL 0.6/0.5 (continued)

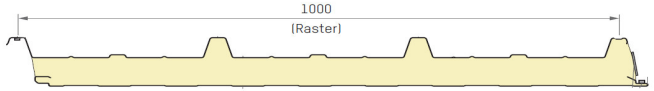


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Table D.1: Wind uplift pressure

*without accounting for deflection

Structural system	Color group	Characteristic wind uplift pressure in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III*	7.86	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.43	1.37	1.32	1.27	1.22	1.19	1.15
	I.II.III	4.90	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.43	1.37	1.32	1.27	1.22	1.19	1.15
2-span	I	7.83	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.43	1.37	1.32	1.27	1.22	1.19	1.15
	II	7.83	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.43	1.37	1.32	1.27	1.22	1.19	1.15
	III	7.83	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.43	1.37	1.32	1.27	1.22	1.19	1.15
3-span	I	7.00	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.43	1.37	1.32	1.27	1.22	1.19	1.15
	II	7.00	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.43	1.37	1.32	1.27	1.22	1.19	1.15
	III	7.00	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.43	1.37	1.32	1.27	1.22	1.19	1.15

Table D.2: Snow load

*without accounting for deflection

Structural system	Color group	Characteristic snow load in kN/m²																			
		0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
1-span	I.II.III*	40	40	40	40	40	40	40	42	44	46	47	49	51	52	54	55	56	58	59	60
		5.34	3.92	3.18	2.71	2.38	2.15	1.96	1.82	1.70	1.60	1.51	1.44	1.38	1.32	1.27	1.22	1.18	1.15	1.12	1.08
	I.II.III	40	40	40	40	40	40	40	42	44	46	47	49	51	52	54	55	56	58	59	60
		4.49	3.92	3.18	2.71	2.38	2.15	1.96	1.82	1.70	1.60	1.51	1.44	1.38	1.32	1.27	1.22	1.18	1.15	1.12	1.08
2-span	I.II.III	40	40	40	40	40	40	40	42	44	46	47	49	51	52	54	55	56	58	59	60
		5.34	3.92	3.18	2.71	2.38	2.15	1.96	1.82	1.70	1.60	1.51	1.44	1.38	1.32	1.27	1.22	1.18	1.15	1.12	1.08
		60	60	60	65	70	75	79	84	87	91	94	97	101	104	107	109	112	115	118	120
3-span	I.II.III	40	40	40	40	40	40	40	42	44	46	47	49	51	52	54	55	56	58	59	60
		5.34	3.92	3.18	2.71	2.38	2.15	1.96	1.82	1.70	1.60	1.51	1.44	1.38	1.32	1.27	1.22	1.18	1.15	1.12	1.08
		60	60	60	65	70	75	79	84	87	91	94	97	101	104	107	109	112	115	118	120

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 072 TL 0.6/0.5 (continued)

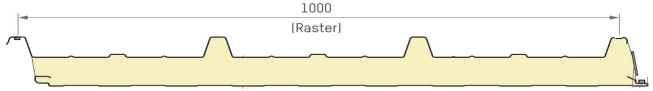

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Table D.3: Wind uplift for screws (see Comments no. 9)

Structural system	Color group	Characteristic wind uplift for screws in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		4.90	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.43	1.37	1.32	1.27	1.22	1.19	1.15
2-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		7.83	4.89	3.64	2.55	1.95	1.58	1.34	1.16	1.03	0.94	0.85	0.79	0.73	0.68	0.64	0.60	0.57	0.54	0.51	0.49
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		7.83	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.42	1.32	1.23	1.16	1.09	1.03	0.99
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		7.83	4.89	3.40	2.34	1.76	1.42	1.20	1.05	0.95	0.86	0.79	0.73	0.68	0.63	0.59	0.56	0.53	0.51	0.48	0.46
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		7.83	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.46	1.35	1.26	1.18	1.10	1.04	1.00	0.95
3-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		7.00	4.89	3.78	3.15	2.49	2.02	1.70	1.46	1.28	1.14	1.03	0.96	0.88	0.81	0.76	0.71	0.67	0.63	0.60	0.57
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		7.00	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.43	1.37	1.32	1.27	1.22	1.19	1.15
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		7.00	4.89	3.78	3.13	2.40	1.94	1.62	1.39	1.22	1.08	0.99	0.90	0.83	0.77	0.72	0.67	0.64	0.60	0.57	0.54
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		7.00	4.89	3.78	3.15	2.73	2.43	2.21	2.03	1.88	1.76	1.66	1.57	1.49	1.43	1.37	1.32	1.27	1.22	1.19	1.13

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 082 TL 0.6/0.5 (continued)

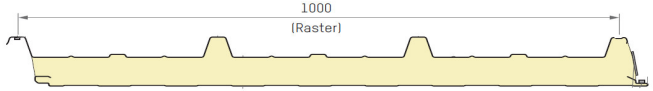

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Table D.4: Wind uplift pressure

* without accounting for deflection

Structural system	Color group	Characteristic wind uplift pressure in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III*	9.43	5.87	4.54	3.79	3.29	2.92	2.64	2.41	2.22	2.06	1.93	1.82	1.72	1.63	1.56	1.49	1.43	1.37	1.32	1.28
	I.II.III	5.52	5.52	4.54	3.79	3.29	2.92	2.64	2.41	2.22	2.06	1.93	1.82	1.72	1.63	1.56	1.49	1.43	1.37	1.32	1.28
2-span	I	8.82	5.87	4.54	3.79	3.29	2.92	2.64	2.41	2.22	2.06	1.93	1.82	1.72	1.63	1.56	1.49	1.43	1.37	1.32	1.28
	II	8.82	5.87	4.54	3.79	3.29	2.92	2.64	2.41	2.22	2.06	1.93	1.82	1.72	1.63	1.56	1.49	1.43	1.37	1.32	1.28
	III	8.82	5.87	4.54	3.73	3.20	2.83	2.56	2.35	2.19	2.05	1.93	1.82	1.72	1.63	1.56	1.49	1.43	1.37	1.32	1.28
3-span	I	7.89	5.87	4.54	3.79	3.29	2.92	2.64	2.41	2.22	2.06	1.93	1.82	1.72	1.63	1.56	1.49	1.43	1.37	1.32	1.28
	II	7.89	5.87	4.54	3.79	3.29	2.92	2.64	2.41	2.22	2.06	1.93	1.82	1.72	1.63	1.56	1.49	1.43	1.37	1.32	1.28
	III	7.89	5.87	4.54	3.79	3.29	2.92	2.64	2.41	2.22	2.06	1.93	1.82	1.72	1.63	1.56	1.49	1.43	1.37	1.32	1.28

Table D.5: Snow load

*without accounting for deflection

Structural system	Color group	Characteristic snow load in kN/m²																			
		0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
1-span	I.II.III*	40	40	40	40	40	40	41	43	44	46	47	48	50	51	52	53	54	55	56	58
		6.33	4.66	3.76	3.19	2.78	2.47	2.24	2.05	1.90	1.77	1.67	1.58	1.50	1.43	1.37	1.32	1.27	1.22	1.18	1.15
	I.II.III	40	40	40	40	40	40	41	43	44	46	47	48	50	51	52	53	54	55	56	58
		5.06	4.66	3.76	3.19	2.78	2.47	2.24	2.05	1.90	1.77	1.67	1.58	1.50	1.43	1.37	1.32	1.27	1.22	1.18	1.15
2-span	I.II.III	40	40	40	40	40	40	41	43	44	46	47	48	50	51	52	53	54	55	56	58
		5.86	4.32	3.54	3.04	2.70	2.46	2.24	2.05	1.90	1.77	1.67	1.58	1.50	1.43	1.37	1.32	1.27	1.22	1.18	1.15
		60	60	60	66	72	78	82	85	88	91	94	96	99	101	104	106	108	110	112	115
3-span	I.II.III	40	40	40	40	40	40	41	43	44	46	47	48	50	51	52	53	54	55	56	58
		6.33	4.66	3.76	3.19	2.78	2.47	2.24	2.05	1.90	1.77	1.67	1.58	1.50	1.43	1.37	1.32	1.27	1.22	1.18	1.15
		60	60	63	69	74	78	82	85	88	91	94	96	99	101	104	106	108	110	112	115

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 082 TL 0.6/0.5 (continued)

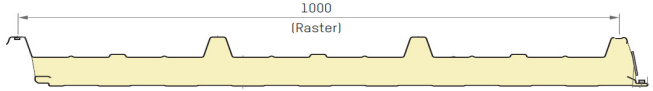

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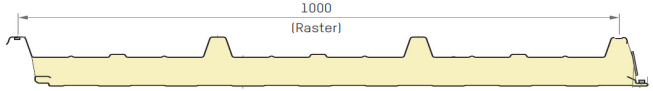
Table D.6: Wind uplift for screws (see Comments no. 9)

Structural system	Color group	Characteristic wind uplift for screws in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		5.52	5.52	4.54	3.79	3.29	2.92	2.64	2.41	2.22	2.06	1.93	1.82	1.72	1.63	1.56	1.49	1.43	1.37	1.32	1.28
2-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		8.82	5.87	3.50	2.43	1.85	1.50	1.26	1.10	0.99	0.90	0.82	0.75	0.70	0.65	0.61	0.58	0.55	0.52	0.50	0.47
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		8.82	5.87	4.54	3.79	3.29	2.92	2.64	2.41	2.22	1.98	1.79	1.63	1.50	1.38	1.29	1.20	1.13	1.07	1.01	0.97
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		8.82	5.63	3.19	2.14	1.60	1.30	1.10	0.99	0.88	0.80	0.74	0.68	0.64	0.60	0.57	0.54	0.51	0.48	0.46	0.44
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		8.82	5.87	4.54	3.73	3.20	2.83	2.56	2.35	2.11	1.88	1.69	1.54	1.41	1.30	1.22	1.14	1.07	1.01	0.97	0.92
3-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		7.89	5.87	4.44	3.16	2.44	1.98	1.65	1.42	1.24	1.11	1.00	0.92	0.85	0.79	0.74	0.69	0.65	0.61	0.58	0.55
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		7.89	5.87	4.54	3.79	3.29	2.92	2.64	2.41	2.22	2.06	1.93	1.82	1.72	1.63	1.54	1.44	1.35	1.27	1.20	1.14
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		7.89	5.87	4.33	3.06	2.33	1.87	1.55	1.33	1.16	1.03	0.94	0.86	0.79	0.74	0.69	0.65	0.61	0.58	0.55	0.52
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		7.89	5.87	4.54	3.79	3.29	2.92	2.64	2.41	2.22	2.06	1.93	1.82	1.72	1.62	1.50	1.40	1.31	1.23	1.16	1.10

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 102 TL 0.6/0.5 (continued)



The following spans have been verified in accordance with the general building authority approval Z-10.4-549 of April 30. 2013 as well as based on EN 14509. Annex E. The most adverse loading condition combination consisting of dead weight, snow, wind, temperature and long-term effects has been verified in accordance with EN 14509. Annex E. while accounting for load factors and combined coefficients specified in DIN EN 1990/NA: 2010-12. The application notes (see page 2) must be observed.

Table D.7: Wind uplift pressure

* without accounting for deflection

Structural system	Color group	Characteristic wind uplift pressure in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III*	11.75	7.42	5.88	5.04	4.39	3.90	3.52	3.21	2.95	2.73	2.54	2.38	2.23	2.10	1.98	1.88	1.79	1.70	1.63	1.56
	I.II.III	6.75	6.75	5.88	5.04	4.39	3.90	3.52	3.21	2.95	2.73	2.54	2.38	2.23	2.10	1.98	1.88	1.79	1.70	1.63	1.56
2-span	I	10.39	7.42	5.88	4.73	4.00	3.50	3.14	2.85	2.63	2.45	2.29	2.16	2.05	1.95	1.87	1.79	1.72	1.66	1.61	1.56
	II	10.39	7.42	5.69	4.54	3.84	3.36	3.02	2.75	2.53	2.36	2.22	2.09	1.99	1.89	1.81	1.74	1.68	1.62	1.56	1.52
	III	10.39	7.42	5.34	4.26	3.60	3.16	2.84	2.59	2.39	2.23	2.10	1.99	1.89	1.81	1.73	1.66	1.61	1.55	1.50	1.46
3-span	I	9.54	7.42	5.88	5.04	4.39	3.90	3.52	3.21	2.95	2.73	2.54	2.38	2.23	2.10	1.98	1.88	1.79	1.70	1.63	1.56
	II	9.55	7.42	5.88	5.04	4.39	3.90	3.48	3.15	2.90	2.69	2.51	2.36	2.23	2.10	1.98	1.88	1.79	1.70	1.63	1.56
	III	9.55	7.42	5.88	5.04	4.30	3.75	3.34	3.03	2.78	2.58	2.42	2.28	2.16	2.06	1.96	1.88	1.79	1.70	1.63	1.56

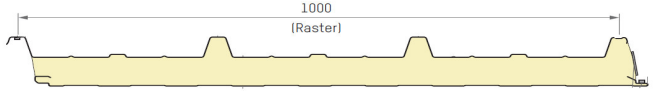
Table D.8: Snow load

*without accounting for deflection

Structural system	Color group	Characteristic snow load in kN/m²																			
		0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
1-span	I.II.III*	40	40	42	45	48	50	51	53	54	55	56	56	57	58	59	60	61	62	63	63
		8.16	6.04	4.88	4.11	3.56	3.13	2.80	2.52	2.30	2.12	1.97	1.84	1.73	1.63	1.55	1.48	1.42	1.36	1.31	1.26
	I.II.III	40	40	42	45	48	50	51	53	54	55	56	56	57	58	59	60	61	62	63	63
		6.19	5.79	4.88	4.11	3.56	3.13	2.80	2.52	2.30	2.12	1.97	1.84	1.73	1.63	1.55	1.48	1.42	1.36	1.31	1.26
2-span	I.II.III	40	40	40	40	40	41	44	46	48	50	52	54	56	58	59	60	61	62	63	63
		6.43	4.70	3.81	3.25	2.87	2.59	2.38	2.21	2.07	1.95	1.85	1.76	1.69	1.62	1.55	1.48	1.42	1.36	1.31	1.26
		60	60	65	71	77	82	87	92	96	100	104	107	111	115	117	119	121	123	125	126
3-span	I.II.III	40	40	40	41	44	47	49	52	54	55	56	56	57	58	59	60	61	62	63	63
		7.37	5.37	4.34	3.70	3.26	2.93	2.68	2.49	2.30	2.12	1.97	1.84	1.73	1.63	1.55	1.48	1.42	1.36	1.31	1.26
		60	65	74	81	87	93	98	103	107	109	111	112	114	115	117	119	121	123	125	126

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 102 TL 0.6/0.5 (continued)



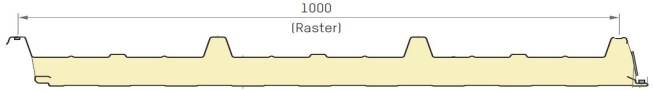
The following spans have been verified in accordance with the general building authority approval Z-10.4-549 of April 30. 2013 as well as based on EN 14509. Annex E. The most adverse loading condition combination consisting of dead weight, snow, wind, temperature and long-term effects has been verified in accordance with EN 14509. Annex E. while accounting for load factors and combined coefficients specified in DIN EN 1990/NA: 2010-12. The application notes (see page 2) must be observed.

Table D.9: Wind uplift for screws (see Comments no. 9)

Structural system	Color group	Characteristic wind uplift for screws in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		6.75	6.75	5.88	5.04	4.39	3.90	3.52	3.21	2.95	2.73	2.54	2.37	2.19	2.03	1.89	1.77	1.66	1.57	1.48	1.41
2-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		10.39	5.72	3.30	2.28	1.75	1.44	1.23	1.08	0.98	0.89	0.81	0.75	0.70	0.65	0.61	0.58	0.55	0.52	0.50	0.47
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		10.39	7.42	5.69	4.54	3.84	3.36	2.88	2.48	2.18	1.95	1.76	1.61	1.48	1.37	1.28	1.20	1.13	1.07	1.01	0.97
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		10.39	5.25	2.83	1.90	1.43	1.22	1.06	0.96	0.87	0.79	0.73	0.68	0.64	0.60	0.57	0.54	0.51	0.49	0.46	0.45
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		10.39	7.42	5.34	4.26	3.60	3.16	2.70	2.32	2.04	1.82	1.64	1.50	1.38	1.28	1.20	1.12	1.06	1.00	0.96	0.92
3-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		9.55	7.22	4.36	3.08	2.36	1.90	1.59	1.37	1.20	1.08	0.99	0.90	0.83	0.77	0.72	0.68	0.64	0.61	0.58	0.55
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		9.55	7.42	5.88	5.04	4.39	3.90	3.47	3.00	2.64	2.35	2.12	1.93	1.77	1.64	1.52	1.42	1.33	1.26	1.18	1.12
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		9.55	7.06	4.20	2.92	2.20	1.76	1.46	1.25	1.10	1.00	0.91	0.83	0.77	0.72	0.67	0.63	0.60	0.57	0.54	0.52
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		9.55	7.42	5.88	5.04	4.30	3.75	3.34	2.92	2.56	2.28	2.05	1.86	1.71	1.58	1.46	1.36	1.28	1.20	1.14	1.08

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 122 TL 0.6/0.5 (continued)



The following spans have been verified in accordance with the general building authority approval Z-10.4-549 of April 30. 2013 as well as based on EN 14509. Annex E. The most adverse loading condition combination consisting of dead weight, snow, wind, temperature and long-term effects has been verified in accordance with EN 14509. Annex E. while accounting for load factors and combined coefficients specified in DIN EN 1990/NA: 2010-12. The application notes (see page 2) must be observed.

Table D.10: Wind uplift pressure

* without accounting for deflection

Structural system	Color group	Characteristic wind uplift pressure in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III*	13.52	8.43	6.65	5.68	5.04	4.58	4.24	3.96	3.72	3.46	3.22	3.02	2.84	2.67	2.52	2.38	2.26	2.14	2.04	1.94
	I.II.III	7.93	7.93	6.65	5.68	5.04	4.58	4.24	3.96	3.72	3.46	3.22	3.02	2.84	2.67	2.52	2.38	2.26	2.14	2.04	1.94
2-span	I	10.98	8.43	6.65	5.31	4.45	3.87	3.44	3.12	2.86	2.66	2.48	2.33	2.21	2.10	2.00	1.91	1.84	1.77	1.70	1.65
	II	10.98	8.42	6.46	5.09	4.27	3.71	3.30	3.00	2.75	2.56	2.39	2.25	2.13	2.03	1.94	1.86	1.78	1.72	1.66	1.60
	III	10.98	8.43	6.04	4.76	3.98	3.47	3.10	2.82	2.59	2.41	2.26	2.13	2.02	1.93	1.85	1.77	1.71	1.65	1.59	1.54
3-span	I	11.06	8.43	6.65	5.68	5.04	4.41	3.91	3.52	3.22	2.97	2.77	2.60	2.45	2.32	2.21	2.11	2.02	1.94	1.88	1.81
	II	11.08	8.42	6.65	5.68	4.97	4.29	3.80	3.43	3.14	2.90	2.70	2.53	2.39	2.26	2.16	2.06	1.98	1.90	1.83	1.77
	III	11.06	8.43	6.65	5.68	4.77	4.12	3.65	3.29	3.01	2.78	2.59	2.43	2.30	2.18	2.08	1.99	1.91	1.84	1.77	1.71

Table D.11: Snow load

*without accounting for deflection

Structural system	Color group	Characteristic snow load in kN/m²																			
		0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
1-span	I.II.III*	40	46	52	56	57	59	61	63	65	66	66	67	67	67	68	68	68	69	69	70
		9.89	7.39	6.01	5.02	4.25	3.72	3.33	3.03	2.79	2.56	2.35	2.18	2.02	1.89	1.78	1.68	1.59	1.52	1.45	1.39
	I.II.III	40	42	52	56	57	59	61	63	65	66	66	67	67	67	68	68	68	69	69	70
		7.28	6.81	6.01	5.02	4.25	3.72	3.33	3.03	2.79	2.56	2.35	2.18	2.02	1.89	1.78	1.68	1.59	1.52	1.45	1.39
2-span	I.II.III	40	40	40	40	41	44	46	48	50	52	54	56	58	60	61	63	64	66	68	69
		6.91	5.03	4.05	3.44	3.03	2.72	2.49	2.30	2.15	2.02	1.92	1.82	1.74	1.67	1.61	1.55	1.50	1.46	1.41	1.37
		60	62	70	76	82	87	92	96	100	104	108	111	115	119	122	125	128	132	135	137
3-span	I.II.III	40	40	40	43	46	49	52	54	56	58	60	62	64	66	68	68	68	69	69	70
		7.89	5.72	4.59	3.89	3.41	3.06	2.79	2.58	2.40	2.26	2.14	2.03	1.94	1.86	1.78	1.68	1.59	1.52	1.45	1.39
		60	70	79	86	92	97	103	107	112	116	120	124	128	132	135	136	136	138	138	139

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 122 TL 0.6/0.5 (continued)

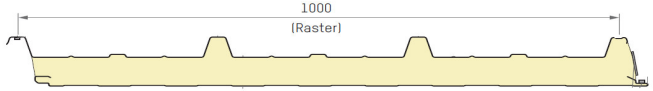


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Table D.12: Wind uplift for screws (see Comments no. 9)

Structural system	Color group	Characteristic wind uplift for screws in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		7.93	7.93	6.65	5.68	5.04	4.58	4.18	3.63	3.21	2.88	2.60	2.38	2.19	2.03	1.89	1.77	1.66	1.57	1.49	1.41
2-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		10.98	5.52	3.13	2.18	1.70	1.42	1.22	1.08	0.98	0.89	0.82	0.76	0.70	0.66	0.62	0.58	0.55	0.53	0.50	0.48
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		10.98	8.42	6.46	5.09	4.13	3.36	2.83	2.45	2.16	1.94	1.76	1.60	1.48	1.38	1.28	1.20	1.13	1.07	1.02	0.98
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		10.98	4.85	2.24	1.54	1.30	1.16	1.05	0.96	0.87	0.80	0.74	0.69	0.64	0.61	0.57	0.54	0.51	0.49	0.47	0.45
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		10.98	8.43	6.04	4.76	3.88	3.14	2.63	2.27	2.00	1.79	1.62	1.49	1.38	1.28	1.20	1.12	1.06	1.01	0.97	0.92
3-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		11.08	7.21	4.30	3.00	2.29	1.84	1.54	1.34	1.18	1.06	0.97	0.89	0.83	0.77	0.72	0.68	0.64	0.61	0.58	0.55
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		11.08	8.42	6.65	5.68	4.97	4.08	3.44	2.96	2.60	2.32	2.10	1.91	1.75	1.62	1.50	1.40	1.32	1.24	1.18	1.12
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		11.06	7.01	4.08	2.79	2.09	1.67	1.40	1.21	1.07	0.98	0.89	0.82	0.76	0.71	0.67	0.63	0.60	0.57	0.54	0.52
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		11.06	8.43	6.65	5.68	4.77	3.98	3.34	2.87	2.52	2.24	2.01	1.83	1.68	1.55	1.44	1.34	1.26	1.19	1.12	1.07

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 142 TL 0.6/0.5 (continued)

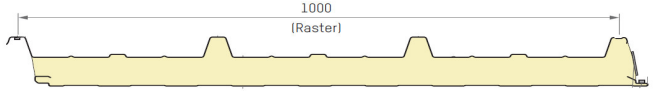

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Table D.13: Wind uplift pressure

* without accounting for deflection

Structural system	Color group	Characteristic wind uplift pressure in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III*	15.02	9.24	7.27	6.19	5.49	4.99	4.60	4.30	4.05	3.84	3.66	3.51	3.37	3.25	3.09	2.93	2.78	2.65	2.52	2.40
	I.II.III	9.02	9.02	7.27	6.19	5.49	4.99	4.60	4.30	4.05	3.84	3.66	3.51	3.37	3.25	3.09	2.93	2.78	2.65	2.52	2.40
2-span	I	11.42	9.24	7.27	5.86	4.88	4.22	3.74	3.37	3.09	2.86	2.66	2.50	2.36	2.24	2.13	2.03	1.95	1.87	1.80	1.74
	II	11.42	9.24	7.19	5.61	4.67	4.04	3.58	3.24	2.96	2.74	2.56	2.41	2.28	2.16	2.06	1.97	1.89	1.82	1.75	1.69
	III	11.42	9.24	6.72	5.23	4.35	3.76	3.35	3.03	2.78	2.58	2.42	2.28	2.16	2.05	1.96	1.88	1.80	1.74	1.68	1.62
3-span	I	12.46	9.24	7.27	6.19	5.49	4.80	4.23	3.80	3.46	3.18	2.96	2.76	2.60	2.46	2.34	2.23	2.13	2.05	1.97	1.90
	II	12.46	9.24	7.27	6.19	5.43	4.67	4.12	3.69	3.36	3.10	2.88	2.69	2.53	2.40	2.28	2.17	2.08	2.00	1.92	1.86
	III	12.46	9.24	7.27	6.19	5.21	4.47	3.94	3.54	3.22	2.96	2.76	2.58	2.43	2.30	2.19	2.09	2.00	1.93	1.86	1.79

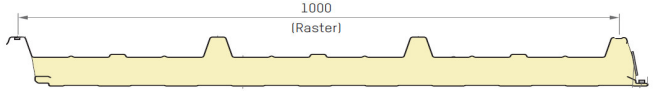
Table D.14: Snow load

*without accounting for deflection

Structural system	Color group	Characteristic snow load in kN/m²																			
		0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
1-span	I.II.III*	43	53	55	57	58	60	62	64	66	67	69	71	72	74	76	77	78	78	78	79
		11.50	8.52	6.32	5.09	4.30	3.76	3.35	3.04	2.80	2.60	2.44	2.30	2.18	2.08	1.99	1.91	1.82	1.72	1.63	1.56
	I.II.III	40	49	55	57	58	60	62	64	66	67	69	71	72	74	76	77	78	78	78	79
		8.32	7.78	6.32	5.09	4.30	3.76	3.35	3.04	2.80	2.60	2.44	2.30	2.18	2.08	1.99	1.91	1.82	1.72	1.63	1.56
2-span	I.II.III	40	40	40	40	43	46	48	50	52	54	56	58	60	61	63	65	66	68	70	71
		7.32	5.32	4.27	3.62	3.18	2.85	2.60	2.40	2.23	2.10	1.98	1.88	1.80	1.72	1.66	1.60	1.54	1.49	1.45	1.41
		60	66	74	80	86	91	96	100	104	108	112	115	119	122	126	129	132	135	139	142
3-span	I.II.III	40	40	42	45	49	51	54	56	58	60	62	64	66	68	70	71	73	75	77	79
		8.32	6.02	4.82	4.07	3.56	3.18	2.89	2.67	2.48	2.33	2.20	2.09	1.99	1.91	1.83	1.76	1.70	1.65	1.60	1.56
		63	75	84	90	97	102	107	112	116	120	124	128	132	136	139	142	146	150	153	157

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 142 TL 0.6/0.5 (continued)



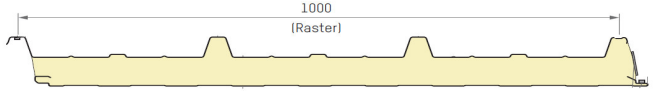
The following spans have been verified in accordance with the general building authority approval Z-10.4-549 of April 30. 2013 as well as based on EN 14509. Annex E. The most adverse loading condition combination consisting of dead weight, snow, wind, temperature and long-term effects has been verified in accordance with EN 14509. Annex E. while accounting for load factors and combined coefficients specified in DIN EN 1990/NA: 2010-12. The application notes (see page 2) must be observed.

Table D.15: Wind uplift for screws (see Comments no. 9)

Structural system	Color group	Characteristic wind uplift for screws in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		9.02	9.02	7.27	6.19	5.49	4.94	4.19	3.64	3.22	2.88	2.61	2.38	2.20	2.03	1.90	1.77	1.67	1.57	1.49	1.41
2-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		11.42	5.32	2.99	2.12	1.68	1.40	1.22	1.08	0.98	0.90	0.82	0.76	0.71	0.66	0.62	0.59	0.56	0.53	0.50	0.48
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		11.42	9.24	7.19	5.28	4.07	3.32	2.80	2.43	2.15	1.93	1.75	1.60	1.48	1.38	1.29	1.21	1.14	1.08	1.02	0.98
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		11.42	4.42	1.75	1.43	1.26	1.13	1.04	0.96	0.87	0.80	0.74	0.69	0.65	0.61	0.58	0.55	0.52	0.49	0.47	0.45
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		11.42	9.24	6.72	4.96	3.78	3.06	2.57	2.23	1.97	1.78	1.62	1.48	1.38	1.28	1.20	1.13	1.07	1.01	0.97	0.93
3-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		12.46	7.21	4.23	2.94	2.23	1.80	1.51	1.31	1.16	1.04	0.96	0.89	0.82	0.77	0.72	0.68	0.64	0.61	0.58	0.55
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		12.46	9.24	7.27	6.19	4.98	4.05	3.41	2.94	2.58	2.30	2.07	1.89	1.74	1.60	1.49	1.40	1.31	1.24	1.17	1.11
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		12.46	6.94	3.96	2.67	2.00	1.60	1.35	1.18	1.05	0.96	0.88	0.82	0.76	0.71	0.67	0.63	0.60	0.57	0.54	0.52
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		12.46	9.24	7.27	6.19	4.85	3.93	3.29	2.82	2.48	2.20	1.98	1.80	1.65	1.53	1.42	1.33	1.25	1.18	1.12	1.06

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 162 TL 0.6/0.5 (continued)



The following spans have been verified in accordance with the general building authority approval Z-10.4-549 of April 30. 2013 as well as based on EN 14509. Annex E. The most adverse loading condition combination consisting of dead weight, snow, wind, temperature and long-term effects has been verified in accordance with EN 14509. Annex E. while accounting for load factors and combined coefficients specified in DIN EN 1990/NA: 2010-12. The application notes (see page 2) must be observed.

Table D.16: Wind uplift pressure

* without accounting for deflection

Structural system	Color group	Characteristic wind uplift pressure in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III*	16.55	10.05	7.88	6.70	5.93	5.38	4.96	4.64	4.36	4.13	3.94	3.77	3.62	3.49	3.37	3.27	3.17	3.08	2.95	2.82
	I.II.III	10.05	10.05	7.88	6.70	5.93	5.38	4.96	4.64	4.36	4.13	3.94	3.77	3.62	3.49	3.37	3.27	3.17	3.08	2.95	2.82
2-span	I	11.72	10.05	7.88	6.37	5.27	4.54	4.01	3.61	3.30	3.04	2.83	2.65	2.50	2.37	2.25	2.15	2.06	1.97	1.90	1.83
	II	11.72	10.05	7.88	6.10	5.04	4.34	3.84	3.46	3.16	2.92	2.72	2.55	2.41	2.28	2.18	2.08	1.99	1.91	1.84	1.78
	III	11.72	10.05	7.35	5.67	4.69	4.04	3.58	3.24	2.96	2.75	2.56	2.41	2.28	2.17	2.07	1.98	1.90	1.83	1.76	1.70
3-span	I	13.76	10.05	7.88	6.70	5.93	5.16	4.53	4.05	3.68	3.38	3.13	2.92	2.74	2.59	2.46	2.34	2.24	2.14	2.06	1.98
	II	13.76	10.05	7.88	6.70	5.87	5.01	4.40	3.94	3.58	3.28	3.04	2.84	2.67	2.52	2.39	2.28	2.18	2.09	2.01	1.94
	III	13.75	10.05	7.88	6.70	5.61	4.79	4.20	3.76	3.42	3.14	2.91	2.72	2.56	2.42	2.30	2.19	2.10	2.01	1.94	1.87

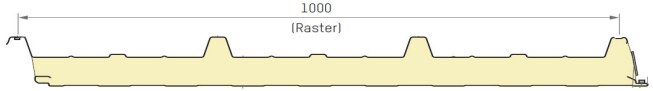
Table D.17 Snow load

*without accounting for deflection

Structural system	Color group	Characteristic snow load in kN/m²																			
		0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
1-span	I.II.III*	50	52	54	55	57	59	60	62	64	65	67	68	70	72	73	75	77	78	80	81
		12.95	8.25	6.13	4.94	4.18	3.64	3.25	2.95	2.71	2.52	2.36	2.22	2.11	2.01	1.92	1.85	1.78	1.72	1.66	1.61
	I.II.III	40	52	54	55	57	59	60	62	64	65	67	68	70	72	73	75	77	78	80	81
		9.27	8.25	6.13	4.94	4.18	3.64	3.25	2.95	2.71	2.52	2.36	2.22	2.11	2.01	1.92	1.85	1.78	1.72	1.66	1.61
2-span	I.II.III	40	40	40	43	45	48	50	52	54	56	58	60	62	63	65	67	68	70	71	73
		7.65	5.57	4.47	3.78	3.31	2.96	2.70	2.48	2.31	2.17	2.04	1.94	1.85	1.77	1.70	1.64	1.58	1.53	1.48	1.44
		60	70	78	85	90	95	100	104	108	112	116	119	123	126	129	133	136	139	142	145
3-span	I.II.III	40	40	44	48	51	53	56	58	60	62	64	66	68	70	71	73	75	77	78	80
		8.68	6.28	5.02	4.23	3.69	3.29	2.99	2.75	2.55	2.39	2.26	2.14	2.04	1.95	1.87	1.80	1.74	1.68	1.63	1.58
		67	79	88	95	101	106	111	115	119	124	128	132	135	139	142	146	149	153	156	159

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 162 TL 0.6/0.5 (continued)



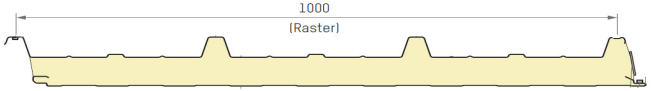
The following spans have been verified in accordance with the general building authority approval Z-10.4-549 of April 30. 2013 as well as based on EN 14509. Annex E. The most adverse loading condition combination consisting of dead weight, snow, wind, temperature and long-term effects has been verified in accordance with EN 14509. Annex E. while accounting for load factors and combined coefficients specified in DIN EN 1990/NA: 2010-12. The application notes (see page 2) must be observed.

Table D.18: Wind uplift for screws (see Comments no. 9)

Structural system	Color group	Characteristic wind uplift for screws in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		10.05	10.05	7.88	6.70	5.93	4.96	4.21	3.65	3.23	2.89	2.62	2.39	2.20	2.04	1.90	1.78	1.67	1.57	1.49	1.41
2-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		11.72	5.12	2.89	2.08	1.67	1.41	1.22	1.09	0.99	0.90	0.83	0.77	0.72	0.67	0.63	0.59	0.56	0.53	0.51	0.49
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		11.72	10.05	7.40	5.22	4.02	3.28	2.78	2.42	2.14	1.93	1.76	1.61	1.49	1.38	1.30	1.22	1.15	1.08	1.03	0.99
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		11.72	2.24	1.63	1.40	1.24	1.13	1.04	0.97	0.88	0.81	0.75	0.70	0.66	0.62	0.58	0.55	0.52	0.50	0.48	0.46
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		11.71	10.05	7.01	4.85	3.70	3.00	2.54	2.21	1.96	1.77	1.62	1.49	1.38	1.29	1.21	1.14	1.07	1.02	0.98	0.93
3-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		13.76	7.20	4.17	2.87	2.18	1.76	1.49	1.30	1.15	1.04	0.96	0.89	0.82	0.77	0.72	0.68	0.64	0.61	0.58	0.55
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		13.76	10.05	7.88	6.41	4.96	4.02	3.38	2.92	2.56	2.28	2.06	1.88	1.72	1.60	1.48	1.39	1.31	1.23	1.17	1.11
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		13.75	6.88	3.84	2.56	1.92	1.56	1.32	1.16	1.04	0.96	0.88	0.81	0.76	0.71	0.67	0.63	0.60	0.57	0.54	0.52
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		13.75	10.05	7.88	6.27	4.81	3.88	3.24	2.78	2.44	2.17	1.95	1.78	1.64	1.51	1.41	1.32	1.24	1.17	1.11	1.06

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 182 TL 0.6/0.5 (continued)



The following spans have been verified in accordance with the general building authority approval Z-10.4-549 of April 30. 2013 as well as based on EN 14509. Annex E. The most adverse loading condition combination consisting of dead weight, snow, wind, temperature and long-term effects has been verified in accordance with EN 14509. Annex E. while accounting for load factors and combined coefficients specified in DIN EN 1990/NA: 2010-12. The application notes (see page 2) must be observed.

Table D.19: Wind uplift pressure

* without accounting for deflection

Structural system	Color group	Characteristic wind uplift pressure in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III*	17.97	10.77	8.41	7.14	6.32	5.73	5.28	4.93	4.64	4.39	4.18	4.00	3.84	3.70	3.58	3.46	3.30	3.14	3.00	2.86
	I.II.III	11.00	10.76	8.41	7.14	6.32	5.73	5.28	4.93	4.64	4.39	4.18	4.00	3.84	3.70	3.58	3.46	3.30	3.14	3.00	2.86
2-span	I	11.90	10.76	7.64	5.86	4.83	4.15	3.66	3.29	3.00	2.77	2.58	2.42	2.28	2.16	2.05	1.96	1.87	1.80	1.73	1.66
	II	11.90	10.77	7.23	5.54	4.57	3.93	3.47	3.13	2.86	2.65	2.47	2.32	2.19	2.08	1.98	1.89	1.81	1.74	1.67	1.62
	III	11.90	10.08	6.60	5.05	4.17	3.60	3.20	2.90	2.66	2.47	2.31	2.18	2.06	1.96	1.87	1.79	1.72	1.66	1.60	1.54
3-span	I	14.32	10.76	8.41	6.78	5.54	4.72	4.12	3.68	3.34	3.06	2.83	2.64	2.48	2.34	2.22	2.12	2.02	1.94	1.86	1.80
	II	14.32	10.76	8.41	6.56	5.35	4.55	3.98	3.55	3.22	2.96	2.74	2.56	2.40	2.27	2.16	2.05	1.96	1.88	1.81	1.75
	III	14.31	10.76	8.18	6.20	5.05	4.29	3.75	3.35	3.04	2.80	2.60	2.43	2.28	2.16	2.06	1.96	1.88	1.81	1.74	1.68

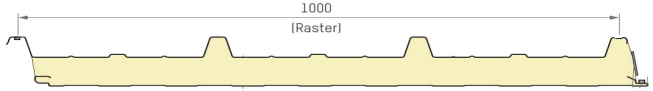
Table D.18: Snow load

*without accounting for deflection

Structural system	Color group	Characteristic snow load in kN/m²																			
		0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
1-span	I.II.III*	48	50	52	53	55	56	58	59	61	62	64	66	67	69	70	72	73	75	76	77
		12.30	7.82	5.83	4.70	3.98	3.47	3.10	2.81	2.59	2.40	2.25	2.12	2.01	1.92	1.83	1.76	1.69	1.64	1.58	1.53
	I.II.III	40	50	52	53	55	56	58	59	61	62	64	66	67	69	70	72	73	75	76	77
		10.18	7.82	5.83	4.70	3.98	3.47	3.10	2.81	2.59	2.40	2.25	2.12	2.01	1.92	1.83	1.76	1.69	1.64	1.58	1.53
2-span	I.II.III	40	40	41	44	47	50	52	54	56	58	60	62	63	65	67	68	70	71	73	74
		7.92	5.78	4.64	3.92	3.43	3.06	2.78	2.56	2.38	2.23	2.10	1.99	1.90	1.82	1.74	1.67	1.61	1.56	1.51	1.46
		62	74	82	88	94	99	103	108	112	116	119	123	126	130	133	136	139	142	145	147
3-span	I.II.III	40	42	46	49	52	55	57	59	61	62	64	66	67	69	70	72	73	74	76	77
		8.96	6.50	5.19	4.37	3.80	3.39	3.07	2.81	2.59	2.40	2.25	2.12	2.01	1.92	1.83	1.76	1.69	1.63	1.58	1.53
		70	83	92	98	104	110	114	118	122	124	128	131	134	137	140	143	145	148	151	154

ROMA
INSULATION SYSTEMS

Permissible spans for ROMA roof elements D 182 TL 0.6/0.5 (continued)



The following spans have been verified in accordance with the general building authority approval Z-10.4-549 of April 30. 2013 as well as based on EN 14509. Annex E. The most adverse loading condition combination consisting of dead weight, snow, wind, temperature and long-term effects has been verified in accordance with EN 14509. Annex E. while accounting for load factors and combined coefficients specified in DIN EN 1990/NA: 2010-12. The application notes (see page 2) must be observed.

Table D.17: Wind uplift for screws (see Comments no. 9)

Structural system	Color group	Characteristic wind uplift for screws in kN/m²																			
		-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00	-4.25	-4.50	-4.75	-5.00
1-span	I.II.III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		11.00	10.76	8.41	7.14	6.07	4.98	4.22	3.66	3.24	2.90	2.62	2.40	2.20	2.04	1.90	1.78	1.67	1.58	1.49	1.42
2-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		11.89	4.94	2.82	2.06	1.67	1.42	1.23	1.10	1.00	0.91	0.84	0.78	0.72	0.68	0.64	0.60	0.57	0.54	0.51	0.49
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		11.90	10.77	7.23	5.17	3.99	3.26	2.77	2.42	2.14	1.94	1.76	1.62	1.50	1.40	1.30	1.22	1.16	1.09	1.04	1.00
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		11.89	1.98	1.60	1.39	1.25	1.14	1.06	0.98	0.89	0.82	0.76	0.71	0.66	0.62	0.59	0.56	0.53	0.50	0.48	0.46
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		11.89	10.08	6.60	4.75	3.63	2.96	2.52	2.20	1.96	1.77	1.62	1.49	1.39	1.30	1.22	1.14	1.08	1.03	0.99	0.94
3-span	I.II	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		14.31	7.20	4.11	2.82	2.14	1.74	1.48	1.29	1.15	1.04	0.96	0.89	0.82	0.77	0.72	0.68	0.64	0.61	0.58	0.55
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		14.31	10.76	8.41	6.41	4.94	4.00	3.36	2.90	2.54	2.27	2.05	1.87	1.72	1.59	1.48	1.39	1.30	1.23	1.17	1.11
	III	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		14.31	6.82	3.72	2.48	1.87	1.53	1.31	1.16	1.04	0.96	0.88	0.81	0.76	0.71	0.67	0.63	0.60	0.57	0.55	0.52
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		14.31	10.76	8.18	6.20	4.77	3.84	3.20	2.75	2.41	2.14	1.94	1.76	1.62	1.50	1.40	1.32	1.24	1.17	1.11	1.06