

Surface water heating
and cooling systems



SYSTEM **KAN-therm**

Floor heating Manual

Performance of surface
heating - tables

EN 2015

TECHNOLOGY OF SUCCESS



ISO 9001

Tab 1. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 14x2.0; $t_{fm} = 35^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	76.10	31.0	64.75	30.0	55.51	29.1	47.94	28.4	41.58	27.8	36.01	27.3
	0.05	55.17	29.1	48.32	28.5	42.52	27.9	37.58	27.5	33.36	27.1	29.48	26.7
	0.10	43.23	28.0	38.67	27.6	34.75	27.2	31.28	26.9	28.27	26.6	25.45	26.4
	0.15	35.54	27.3	32.35	27.0	29.48	26.7	26.88	26.5	24.61	26.3	22.43	26.1
22	0.00	90.39	30.4	76.91	29.1	65.94	28.1	56.94	27.3	49.39	26.6	42.78	26.0
	0.05	65.54	29.0	57.40	27.3	50.51	26.7	44.64	26.1	39.62	25.7	35.02	25.2
	0.10	51.35	26.8	45.94	26.3	41.28	25.8	37.15	25.4	33.58	25.1	30.23	24.8
	0.15	42.22	25.9	38.42	25.6	35.02	25.2	31.92	25.0	29.23	24.7	26.65	24.5
20	0.00	104.63	29.7	89.02	28.2	76.32	27.1	65.91	26.1	57.17	25.3	49.52	24.6
	0.05	75.86	27.0	66.44	26.2	58.46	25.4	51.67	24.8	45.86	24.2	40.54	23.8
	0.10	59.44	25.5	53.17	24.9	47.78	24.4	43.00	24.0	38.87	23.6	34.99	23.2
	0.15	48.86	24.5	44.47	24.1	40.54	23.8	36.95	23.4	33.83	23.1	30.84	22.9
18	0.00	118.83	29.0	101.10	27.4	86.68	26.0	74.86	24.9	64.93	24.0	56.23	23.2
	0.05	86.15	26.0	75.46	25.0	66.40	24.1	58.68	23.4	52.09	22.8	46.04	22.3
	0.10	67.51	24.3	60.39	23.6	54.27	23.0	48.84	22.5	44.15	22.1	39.74	21.7
	0.15	55.50	23.1	50.51	22.7	46.04	22.3	41.97	21.9	38.42	21.6	35.03	21.2
15	0.00	140.08	28.0	119.19	26.0	102.18	24.5	88.24	23.2	76.54	22.1	66.29	21.1
	0.05	101.56	24.4	88.96	23.2	78.27	22.2	69.18	21.4	61.41	20.7	54.27	20.0
	0.10	79.58	22.4	71.19	21.6	63.97	20.9	57.58	20.3	52.05	19.8	46.85	19.3
	0.15	65.42	21.1	59.54	20.5	54.27	20.0	49.47	19.6	45.30	19.2	41.29	18.8

Tab 2. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 14x2.0; $t_{fm} = 40^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	111.73	34.3	95.07	32.8	81.50	31.5	70.39	30.5	61.05	29.7	52.88	28.9
	0.05	81.01	31.5	70.95	30.6	62.43	29.8	55.18	29.1	48.98	28.5	43.29	28.0
	0.10	63.47	29.9	56.78	29.3	51.03	28.7	45.92	28.3	41.51	27.8	37.36	27.5
	0.15	52.18	28.8	47.49	28.4	43.29	28.0	39.46	27.7	36.13	27.3	32.94	27.0
22	0.00	125.92	33.7	107.14	31.9	91.85	30.5	79.32	29.3	68.80	28.4	59.59	27.5
	0.05	91.29	30.5	79.96	29.4	70.36	28.5	62.18	27.8	55.20	27.1	48.79	26.5
	0.10	71.53	28.6	63.99	27.9	57.51	27.3	51.76	26.8	46.78	26.3	42.11	25.9
	0.15	58.81	27.4	53.52	27.0	48.78	26.5	44.47	26.1	40.72	25.8	37.12	25.4
20	0.00	140.08	33.0	119.19	31.0	102.18	29.5	88.24	28.2	76.54	27.1	66.29	26.1
	0.05	101.56	29.4	88.96	28.2	78.27	27.2	69.18	26.4	61.41	25.7	54.27	25.0
	0.10	79.58	27.4	71.19	26.6	63.97	25.9	57.58	25.3	52.05	24.8	46.85	24.3
	0.15	65.42	26.1	59.54	25.5	54.27	25.0	49.47	24.6	45.30	24.2	41.29	23.8
18	0.00	154.23	32.3	131.23	30.2	112.50	28.4	97.16	27.0	84.27	25.8	72.99	24.8
	0.05	111.82	28.4	97.94	27.1	86.18	26.0	76.16	25.1	67.61	24.3	59.76	23.5
	0.10	87.62	26.1	78.38	25.3	70.44	24.5	63.39	23.9	57.30	23.3	51.58	22.8
	0.15	72.03	24.7	65.56	24.1	59.75	23.5	54.47	23.0	49.87	22.6	45.46	22.2
15	0.00	175.43	31.2	149.27	28.8	127.97	26.8	110.52	25.2	95.86	23.9	83.02	22.7
	0.05	127.19	26.8	111.41	25.3	98.03	24.1	86.64	23.0	76.90	22.1	67.97	21.3
	0.10	99.66	24.2	89.16	23.3	80.12	22.4	72.11	21.7	65.18	21.0	58.67	20.4
	0.15	81.93	22.6	74.57	21.9	67.97	21.3	61.96	20.7	56.73	20.3	51.71	19.8

Tab 3. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 14x2.0; $t_{fm} = 45^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05			0.10			0.15			0.20			0.25			0.30		
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s		
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]		
24	0.00	147.16	37.6	125.21	35.6	107.34	33.9	92.70	32.6	80.41	31.4	69.64	30.4						
	0.05	106.69	33.9	93.45	32.7	82.23	31.6	72.67	30.7	64.51	30.0	57.02	29.3						
	0.10	83.60	31.7	74.79	30.9	67.21	30.2	60.49	29.6	54.68	29.1	49.21	28.6						
	0.15	68.73	30.4	62.55	29.8	57.01	29.3	51.97	28.8	47.58	28.4	43.38	28.0						
22	0.00	161.30	36.9	137.24	34.7	117.66	32.9	101.61	31.4	88.13	30.2	76.34	29.1						
	0.05	116.95	32.8	102.43	31.5	90.13	30.3	79.66	29.4	70.71	28.5	62.50	27.8						
	0.10	91.63	30.5	81.98	29.6	73.67	28.8	66.30	28.1	59.93	27.5	53.94	27.0						
	0.15	75.33	29.0	68.56	28.3	62.49	27.8	56.97	27.3	52.16	26.8	47.55	26.4						
20	0.00	175.43	36.2	149.27	33.8	127.97	31.8	110.52	30.2	95.86	28.9	83.02	27.7						
	0.05	127.19	31.8	111.41	30.3	98.03	29.1	86.64	28.0	76.90	27.1	67.97	26.3						
	0.10	99.66	29.2	89.16	28.3	80.12	27.4	72.11	26.7	65.18	26.0	58.67	25.4						
	0.15	81.93	27.6	74.57	26.9	67.97	26.3	61.96	25.7	56.73	25.3	51.71	24.8						
18	0.00	189.56	35.6	161.29	32.9	138.27	30.8	119.41	29.1	103.57	27.6	89.71	26.3						
	0.05	137.43	30.7	120.38	29.1	105.92	27.8	93.61	26.7	83.09	25.7	73.44	24.8						
	0.10	107.69	28.0	96.34	26.9	86.57	26.0	77.91	25.2	70.43	24.5	63.39	23.9						
	0.15	88.53	26.2	80.57	25.5	73.44	24.8	66.95	24.2	61.30	23.7	55.88	23.2						
15	0.00	210.74	34.5	179.31	31.6	153.72	29.2	132.75	27.3	115.15	25.7	99.73	24.2						
	0.05	152.79	29.1	133.83	27.4	117.75	25.9	104.07	24.6	92.38	23.6	81.65	22.6						
	0.10	119.72	26.1	107.10	24.9	96.24	23.9	86.62	23.0	78.30	22.2	70.47	21.5						
	0.15	98.42	24.1	89.57	23.3	81.65	22.6	74.43	21.9	68.14	21.3	62.12	20.8						

Tab 4. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 14x2.0; $t_{fm} = 50^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05			0.10			0.15			0.20			0.25			0.30		
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s		
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]		
24	0.00	182.50	40.9	155.28	38.4	133.12	36.3	114.96	34.6	99.72	33.2	86.37	32.0						
	0.05	132.31	36.3	115.89	34.7	101.97	33.4	90.12	32.3	80.00	31.4	70.71	30.5						
	0.10	103.68	33.6	92.75	32.6	83.35	31.7	75.01	30.9	67.81	30.3	61.03	29.7						
	0.15	85.23	31.9	77.57	31.2	70.71	30.5	64.45	30.0	59.01	29.5	53.80	29.0						
22	0.00	196.62	40.2	167.30	37.5	143.42	35.3	123.86	33.5	107.43	31.9	93.05	30.6						
	0.05	142.55	35.2	124.86	33.6	109.86	32.2	97.10	31.0	86.19	30.0	76.18	29.1						
	0.10	111.70	32.3	99.93	31.3	89.80	30.3	80.82	29.5	73.05	28.8	65.75	28.1						
	0.15	91.83	30.5	83.57	29.7	76.18	29.1	69.44	28.4	63.58	27.9	57.96	27.4						
20	0.00	210.74	39.5	179.31	36.6	153.72	34.2	132.75	32.3	115.15	30.7	99.73	29.2						
	0.05	152.79	34.1	133.83	32.4	117.75	30.9	104.07	29.6	92.38	28.6	81.65	27.6						
	0.10	119.72	31.1	107.10	29.9	96.24	28.9	86.62	28.0	78.30	27.2	70.47	26.5						
	0.15	98.42	29.1	89.57	28.3	81.65	27.6	74.43	26.9	68.14	26.3	62.12	25.8						
18	0.00	224.85	38.8	191.31	35.7	164.02	33.2	141.64	31.1	122.86	29.4	106.41	27.9						
	0.05	163.02	33.1	142.79	31.2	125.64	29.6	111.04	28.3	98.56	27.1	87.12	26.1						
	0.10	127.74	29.8	114.27	28.6	102.69	27.5	92.42	26.6	83.54	25.7	75.19	25.0						
	0.15	105.01	27.7	95.57	26.8	87.12	26.1	79.41	25.4	72.71	24.7	66.28	24.1						
15	0.00	246.01	37.8	209.32	34.4	179.45	31.6	154.98	29.3	134.42	27.4	116.42	25.8						
	0.05	178.36	31.5	156.23	29.5	137.46	27.7	121.49	26.2	107.84	25.0	95.32	23.8						
	0.10	139.76	27.9	125.03	26.6	112.35	25.4	101.12	24.4	91.40	23.5	82.27	22.6						
	0.15	114.89	25.6	104.57	24.7	95.31	23.8	86.88	23.0	79.55	22.4	72.52	21.7						

Tab 5. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 16×2.0; $t_{fm} = 35^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	76.59	31.1	65.68	30.1	56.61	29.2	49.03	28.5	42.59	27.9	36.96	27.4
	0.05	55.53	29.1	48.93	28.5	43.24	28.0	38.32	27.5	34.07	27.2	30.20	26.8
	0.10	43.49	28.0	39.10	27.6	35.25	27.3	31.82	26.9	28.81	26.7	26.00	26.4
	0.15	35.73	27.3	32.63	27.0	29.83	26.8	27.28	26.5	25.01	26.3	22.87	26.1
22	0.00	90.98	30.4	78.02	29.2	67.24	28.2	58.24	27.4	50.59	26.7	43.90	26.1
	0.05	65.96	28.1	58.12	27.4	51.36	26.8	45.52	26.2	40.47	25.7	35.87	25.3
	0.10	51.66	26.8	46.44	26.3	41.88	25.9	37.80	25.5	34.22	25.2	30.89	24.9
	0.15	42.45	25.9	38.77	25.6	35.44	25.3	32.40	25.0	29.71	24.8	27.16	24.5
20	0.00	105.31	29.8	90.31	28.4	77.83	27.2	67.41	26.2	58.55	25.4	50.81	24.7
	0.05	76.35	27.1	67.27	26.2	59.45	25.5	52.69	24.9	46.84	24.3	41.52	23.8
	0.10	59.79	25.5	53.76	25.0	48.47	24.5	43.75	24.1	39.61	23.7	35.75	23.3
	0.15	49.13	24.5	44.87	24.2	41.02	23.8	37.50	23.5	34.39	23.2	31.44	22.9
18	0.00	119.60	29.1	102.56	27.5	88.39	26.2	76.56	25.1	66.50	24.2	57.71	23.3
	0.05	86.71	26.0	76.40	25.1	67.52	24.3	59.84	23.5	53.20	22.9	47.15	22.4
	0.10	67.91	24.3	61.05	23.7	55.05	23.1	49.69	22.6	44.98	22.2	40.60	21.8
	0.15	55.80	23.2	50.96	22.7	46.59	22.3	42.59	21.9	39.05	21.6	35.70	21.3
15	0.00	140.99	28.1	120.90	26.2	104.21	24.6	90.25	23.4	78.39	22.3	68.03	21.3
	0.05	102.22	24.5	90.06	23.3	79.59	22.4	70.55	21.5	62.71	20.8	55.59	20.1
	0.10	80.06	22.4	71.97	21.7	64.90	21.0	58.58	20.4	53.03	19.9	47.86	19.4
	0.15	65.78	21.1	60.07	20.6	54.92	20.1	50.21	19.6	46.04	19.3	42.09	18.9

Tab 6. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 16×2.0; $t_{fm} = 40^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	112.46	34.4	96.44	32.9	83.12	31.7	71.99	30.7	62.53	29.8	54.26	29.0
	0.05	81.53	31.5	71.84	30.7	63.48	29.9	56.27	29.2	50.02	28.6	44.34	28.1
	0.10	63.85	29.9	57.40	29.3	51.76	28.8	46.72	28.3	42.29	27.9	38.18	27.5
	0.15	52.47	28.9	47.92	28.4	43.81	28.1	40.05	27.7	36.72	27.4	33.57	27.1
22	0.00	126.73	33.7	108.68	32.1	93.67	30.7	81.13	29.5	70.47	28.5	61.15	27.7
	0.05	91.88	30.5	80.96	29.5	71.54	28.6	63.41	27.9	56.37	27.2	49.97	26.6
	0.10	71.96	28.7	64.69	28.0	58.33	27.4	52.65	26.9	47.66	26.4	43.02	26.0
	0.15	59.13	27.5	54.00	27.0	49.37	26.6	45.13	26.2	41.38	25.8	37.84	25.5
20	0.00	140.99	33.1	120.90	31.2	104.21	29.6	90.25	28.4	78.39	27.3	68.03	26.3
	0.05	102.22	29.5	90.06	28.3	79.59	27.4	70.55	26.5	62.71	25.8	55.59	25.1
	0.10	80.06	27.4	71.97	26.7	64.90	26.0	58.58	25.4	53.03	24.9	47.86	24.4
	0.15	65.78	26.1	60.07	25.6	54.92	25.1	50.21	24.6	46.04	24.3	42.09	23.9
18	0.00	155.23	32.4	133.12	30.3	114.73	28.6	99.37	27.2	86.31	26.0	74.90	24.9
	0.05	112.55	28.4	99.16	27.2	87.63	26.1	77.67	25.2	69.05	24.4	61.20	23.7
	0.10	88.14	26.2	79.24	25.3	71.45	24.6	64.49	24.0	58.38	23.4	52.70	22.9
	0.15	72.42	24.7	66.14	24.1	60.47	23.6	55.28	23.1	50.69	22.7	46.34	22.3
15	0.00	176.57	31.3	151.42	29.0	130.50	27.1	113.03	25.5	98.18	24.1	85.20	22.9
	0.05	128.02	26.9	112.79	25.4	99.68	24.2	88.35	23.2	78.54	22.3	69.62	21.4
	0.10	100.26	24.3	90.13	23.3	81.27	22.5	73.36	21.8	66.41	21.1	59.94	20.6
	0.15	82.38	22.6	75.24	22.0	68.78	21.4	62.88	20.8	57.66	20.3	52.71	19.9

Tab 7. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 16×2.0; $t_{fm} = 45^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	148.11	37.7	127.01	35.8	109.47	34.1	94.81	32.8	82.35	31.6	71.46	30.6
	0.05	107.38	33.9	94.61	32.8	83.61	31.7	74.11	30.9	65.88	30.1	58.40	29.4
	0.10	84.10	31.8	75.61	31.0	68.17	30.3	61.53	29.7	55.70	29.2	50.28	28.7
	0.15	69.10	30.4	63.11	29.8	57.69	29.3	52.75	28.9	48.36	28.5	44.22	28.1
22	0.00	162.35	37.0	139.22	34.9	119.99	33.1	103.92	31.6	90.27	30.4	78.33	29.3
	0.05	117.70	32.9	103.71	31.6	91.65	30.5	81.23	29.5	72.21	28.7	64.01	27.9
	0.10	92.18	30.5	82.87	29.7	74.73	28.9	67.45	28.2	61.06	27.7	55.12	27.1
	0.15	75.75	29.0	69.17	28.4	63.24	27.9	57.82	27.4	53.01	26.9	48.47	26.5
20	0.00	176.57	36.3	151.42	34.0	130.50	32.1	113.03	30.5	98.18	29.1	85.20	27.9
	0.05	128.02	31.9	112.79	30.4	99.68	29.2	88.35	28.2	78.54	27.3	69.62	26.4
	0.10	100.26	29.3	90.13	28.3	81.27	27.5	73.36	26.8	66.41	26.1	59.94	25.6
	0.15	82.38	27.6	75.24	27.0	68.78	26.4	62.88	25.8	57.66	25.3	52.71	24.9
18	0.00	190.79	35.7	163.61	33.1	141.01	31.1	122.13	29.3	106.08	27.8	92.06	26.5
	0.05	138.33	30.8	121.87	29.3	107.70	28.0	95.47	26.8	84.86	25.9	75.22	25.0
	0.10	108.33	28.0	97.39	27.0	87.82	26.1	79.27	25.3	71.76	24.6	64.77	24.0
	0.15	89.02	26.2	81.29	25.5	74.32	24.9	67.94	24.3	62.30	23.8	56.96	23.3
15	0.00	212.10	34.6	181.89	31.8	156.77	29.5	135.77	27.6	117.93	25.9	102.34	24.5
	0.05	153.78	29.2	135.49	27.5	119.74	26.1	106.13	24.8	94.34	23.7	83.63	22.7
	0.10	120.44	26.2	108.27	25.0	97.63	24.0	88.12	23.2	79.77	22.4	72.01	21.7
	0.15	98.96	24.2	90.38	23.4	82.62	22.7	75.53	22.0	69.26	21.4	63.32	20.9

Tab 8. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 16×2.0; $t_{fm} = 50^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	183.68	41.0	157.51	38.6	135.76	36.6	117.58	34.9	102.13	33.5	88.63	32.2
	0.05	133.17	36.3	117.33	34.9	103.69	33.6	91.91	32.5	81.70	31.6	72.42	30.7
	0.10	104.30	33.7	93.76	32.7	84.55	31.8	76.31	31.1	69.08	30.4	62.36	29.8
	0.15	85.70	31.9	78.27	31.2	71.55	30.6	65.41	30.1	59.98	29.6	54.84	29.1
22	0.00	197.89	40.3	169.70	37.7	146.26	35.5	126.68	33.7	110.03	32.2	95.48	30.8
	0.05	143.48	35.3	126.41	33.7	111.72	32.3	99.02	31.2	88.02	30.2	78.02	29.2
	0.10	112.37	32.4	101.02	31.4	91.09	30.4	82.22	29.6	74.43	28.9	67.18	28.2
	0.15	92.33	30.5	84.32	29.8	77.09	29.1	70.47	28.5	64.62	28.0	59.08	27.5
20	0.00	212.10	39.6	181.89	36.8	156.77	34.5	135.77	32.6	117.93	30.9	102.34	29.5
	0.05	153.78	34.2	135.49	32.5	119.74	31.1	106.13	29.8	94.34	28.7	83.63	27.7
	0.10	120.44	31.2	108.27	30.0	97.63	29.0	88.12	28.2	79.77	27.4	72.01	26.7
	0.15	98.96	29.2	90.38	28.4	82.62	27.7	75.53	27.0	69.26	26.4	63.32	25.9
18	0.00	226.31	39.0	194.07	36.0	167.26	33.5	144.87	31.4	125.83	29.7	109.19	28.1
	0.05	164.08	33.2	144.56	31.4	127.76	29.8	113.24	28.5	100.66	27.3	89.23	26.3
	0.10	128.50	29.9	115.52	28.7	104.17	27.6	94.02	26.7	85.11	25.9	76.83	25.1
	0.15	105.59	27.8	96.43	26.9	88.15	26.2	80.59	25.5	73.90	24.8	67.56	24.3
15	0.00	247.61	37.9	212.33	34.7	183.01	31.9	158.50	29.7	137.67	27.7	119.47	26.1
	0.05	179.52	31.6	158.17	29.6	139.78	27.9	123.90	26.5	110.14	25.2	97.62	24.0
	0.10	140.60	28.0	126.39	26.7	113.97	25.6	102.87	24.5	93.12	23.6	84.06	22.8
	0.15	115.52	25.7	105.50	24.8	96.45	23.9	88.18	23.2	80.85	22.5	73.92	21.8

Tab 9. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 18x2.0; $t_{fm} = 35^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	77.09	31.1	66.63	30.2	57.73	29.3	50.14	28.6	43.62	28.0	37.92	27.5
	0.05	55.89	29.2	49.53	28.6	43.97	28.1	39.08	27.6	34.79	27.2	30.93	26.9
	0.10	43.75	28.1	39.52	27.7	35.76	27.3	32.37	27.0	29.35	26.7	26.57	26.5
	0.15	35.93	27.3	32.93	27.0	30.19	26.8	27.68	26.6	25.42	26.4	23.31	26.2
22	0.00	91.57	30.5	79.14	29.3	68.57	28.3	59.56	27.5	51.81	26.8	45.05	26.2
	0.05	66.39	28.1	58.84	27.4	52.23	26.8	46.42	26.3	41.33	25.8	36.74	25.4
	0.10	51.97	26.8	46.95	26.3	42.48	25.9	38.45	25.6	34.86	25.2	31.56	24.9
	0.15	42.68	26.0	39.11	25.6	35.86	25.3	32.88	25.0	30.19	24.8	27.69	24.6
20	0.00	105.99	29.8	91.61	28.5	79.37	27.3	68.94	26.4	59.97	25.6	52.14	24.8
	0.05	76.84	27.1	68.10	26.3	60.45	25.6	53.74	25.0	47.84	24.4	42.52	23.9
	0.10	60.15	25.6	54.34	25.0	49.17	24.6	44.51	24.1	40.35	23.7	36.53	23.4
	0.15	49.40	24.6	45.27	24.2	41.51	23.8	38.06	23.5	34.95	23.2	32.05	23.0
18	0.00	120.37	29.1	104.04	27.6	90.14	26.3	78.30	25.2	68.11	24.3	59.22	23.5
	0.05	87.27	26.1	77.35	25.2	68.65	24.4	61.03	23.7	54.33	23.0	48.30	22.5
	0.10	68.32	24.3	61.72	23.7	55.84	23.2	50.55	22.7	45.83	22.2	41.49	21.8
	0.15	56.11	23.2	51.42	22.8	47.14	22.4	43.23	22.0	39.69	21.7	36.39	21.4
15	0.00	141.90	28.1	122.65	26.4	106.27	24.8	92.30	23.5	80.29	22.4	69.81	21.5
	0.05	102.88	24.5	91.18	23.4	80.93	22.5	71.94	21.7	64.05	20.9	56.93	20.3
	0.10	80.54	22.5	72.76	21.7	65.83	21.1	59.59	20.5	54.02	20.0	48.91	19.5
	0.15	66.14	21.1	60.61	20.6	55.58	20.1	50.96	19.7	46.79	19.3	42.90	19.0

Tab 10. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 18x2.0; $t_{fm} = 40^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	113.18	34.5	97.82	33.1	84.76	31.8	73.62	30.8	64.04	29.9	55.68	29.2
	0.05	82.06	31.6	72.73	30.7	64.55	30.0	57.38	29.3	51.08	28.7	45.41	28.2
	0.10	64.24	29.9	58.03	29.4	52.51	28.9	47.53	28.4	43.09	28.0	39.01	27.6
	0.15	52.76	28.9	48.35	28.5	44.33	28.1	40.64	27.8	37.32	27.5	34.22	27.2
22	0.00	127.55	33.8	110.24	32.2	95.52	30.8	82.97	29.7	72.17	28.7	62.75	27.8
	0.05	92.48	30.6	81.96	29.6	72.75	28.7	64.67	28.0	57.57	27.3	51.18	26.7
	0.10	72.39	28.7	65.40	28.1	59.17	27.5	53.57	27.0	48.56	26.5	43.96	26.1
	0.15	59.45	27.5	54.48	27.0	49.96	26.6	45.80	26.2	42.06	25.9	38.57	25.6
20	0.00	141.90	33.1	122.65	31.4	106.27	29.8	92.30	28.5	80.29	27.4	69.81	26.5
	0.05	102.88	29.5	91.18	28.4	80.93	27.5	71.94	26.7	64.05	25.9	56.93	25.3
	0.10	80.54	27.5	72.76	26.7	65.83	26.1	59.59	25.5	54.02	25.0	48.91	24.5
	0.15	66.14	26.1	60.61	25.6	55.58	25.1	50.96	24.7	46.79	24.3	42.90	24.0
18	0.00	156.24	32.5	135.03	30.5	117.00	28.8	101.63	27.4	88.40	26.2	76.86	25.1
	0.05	113.27	28.5	100.39	27.3	89.11	26.3	79.21	25.3	70.52	24.5	62.68	23.8
	0.10	88.67	26.2	80.11	25.4	72.48	24.7	65.61	24.1	59.48	23.5	53.85	23.0
	0.15	72.82	24.7	66.74	24.2	61.19	23.7	56.10	23.2	51.52	22.8	47.24	22.4
15	0.00	177.72	31.5	153.60	29.2	133.09	27.3	115.60	25.7	100.55	24.3	87.42	23.1
	0.05	128.85	26.9	114.19	25.6	101.36	24.4	90.10	23.3	80.21	22.4	71.30	21.6
	0.10	100.86	24.3	91.12	23.4	82.44	22.6	74.63	21.9	67.66	21.3	61.25	20.7
	0.15	82.83	22.7	75.91	22.0	69.60	21.4	63.82	20.9	58.60	20.4	53.73	20.0

Tab 11. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 18x2.0; $t_{fm} = 45^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	149.07	37.8	128.84	35.9	111.64	34.3	96.97	33.0	84.35	31.8	73.33	30.8
	0.05	108.08	34.0	95.79	32.9	85.02	31.9	75.58	31.0	67.28	30.2	59.81	29.5
	0.10	84.60	31.8	76.43	31.1	69.16	30.4	62.60	29.8	56.75	29.3	51.38	28.8
	0.15	69.48	30.4	63.67	29.9	58.38	29.4	53.53	29.0	49.15	28.6	45.07	28.2
22	0.00	163.40	37.1	141.22	35.1	122.37	33.3	106.29	31.8	92.45	30.6	80.38	29.4
	0.05	118.47	33.0	104.99	31.7	93.19	30.6	82.84	29.7	73.75	28.8	65.56	28.1
	0.10	92.73	30.6	83.78	29.8	75.80	29.0	68.62	28.4	62.21	27.8	56.31	27.2
	0.15	76.16	29.1	69.79	28.5	63.99	27.9	58.68	27.4	53.88	27.0	49.40	26.6
20	0.00	177.72	36.5	153.60	34.2	133.09	32.3	115.60	30.7	100.55	29.3	87.42	28.1
	0.05	128.85	31.9	114.19	30.6	101.36	29.4	90.10	28.3	80.21	27.4	71.30	26.6
	0.10	100.86	29.3	91.12	28.4	82.44	27.6	74.63	26.9	67.66	26.3	61.25	25.7
	0.15	82.83	27.7	75.91	27.0	69.60	26.4	63.82	25.9	58.60	25.4	53.73	25.0
18	0.00	192.02	35.8	165.97	33.4	143.80	31.3	124.91	29.6	108.65	28.1	94.46	26.7
	0.05	139.22	30.9	123.39	29.4	109.52	28.1	97.36	27.0	86.67	26.0	77.04	25.1
	0.10	108.98	28.1	98.46	27.1	89.08	26.2	80.64	25.5	73.11	24.8	66.18	24.1
	0.15	89.50	26.3	82.02	25.6	75.21	25.0	68.96	24.4	63.32	23.9	58.06	23.4
15	0.00	213.48	34.8	184.51	32.1	159.87	29.8	138.86	27.9	120.79	26.2	105.02	24.7
	0.05	154.78	29.3	137.17	27.7	121.76	26.3	108.23	25.0	96.35	23.9	85.65	22.9
	0.10	121.16	26.2	109.46	25.1	99.03	24.2	89.65	23.3	81.27	22.5	73.57	21.8
	0.15	99.50	24.2	91.19	23.4	83.61	22.7	76.66	22.1	70.39	21.5	64.54	21.0

Tab 12. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 18x2.0; $t_{fm} = 50^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	184.87	41.1	159.78	38.8	138.45	36.8	120.25	35.1	104.60	33.7	90.94	32.4
	0.05	134.03	36.4	118.79	35.0	105.44	33.8	93.73	32.7	83.44	31.7	74.17	30.9
	0.10	104.92	33.7	94.79	32.8	85.76	31.9	77.64	31.2	70.38	30.5	63.72	29.9
	0.15	86.17	32.0	78.97	31.3	72.40	30.7	66.39	30.1	60.96	29.6	55.90	29.2
22	0.00	199.18	40.4	172.15	37.9	149.16	35.8	129.56	34.0	112.70	32.4	97.98	31.1
	0.05	144.41	35.4	127.98	33.9	113.60	32.5	100.98	31.4	89.90	30.3	79.91	29.4
	0.10	113.04	32.5	102.12	31.5	92.40	30.6	83.64	29.7	75.83	29.0	68.65	28.4
	0.15	92.84	30.6	85.08	29.9	78.01	29.2	71.52	28.6	65.68	28.1	60.22	27.6
20	0.00	213.48	39.8	184.51	37.1	159.87	34.8	138.86	32.9	120.79	31.2	105.02	29.7
	0.05	154.78	34.3	137.17	32.7	121.76	31.3	108.23	30.0	96.35	28.9	85.65	27.9
	0.10	121.16	31.2	109.46	30.1	99.03	29.2	89.65	28.3	81.27	27.5	73.57	26.8
	0.15	99.50	29.2	91.19	28.4	83.61	27.7	76.66	27.1	70.39	26.5	64.54	26.0
18	0.00	227.77	39.1	196.86	36.2	170.58	33.8	148.16	31.7	128.88	29.9	112.05	28.4
	0.05	165.14	33.3	146.36	31.6	129.91	30.0	115.48	28.7	102.80	27.5	91.39	26.5
	0.10	129.27	30.0	116.79	28.8	105.67	27.8	95.65	26.9	86.72	26.0	78.50	25.3
	0.15	106.17	27.8	97.29	27.0	89.21	26.3	81.79	25.6	75.11	25.0	68.87	24.4
15	0.00	249.21	38.1	215.39	34.9	186.63	32.3	162.10	30.0	141.01	28.1	122.60	26.4
	0.05	180.68	31.7	160.13	29.8	142.14	28.2	126.35	26.7	112.48	25.4	99.99	24.3
	0.10	141.44	28.1	127.78	26.8	115.61	25.7	104.66	24.7	94.88	23.8	85.89	23.0
	0.15	116.16	25.8	106.45	24.9	97.60	24.0	89.49	23.3	82.17	22.6	75.35	22.0

Tab 13. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 20×2.0; $t_{fm} = 35^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	77.59	31.2	67.58	30.3	58.87	29.5	51.28	28.7	44.67	28.1	38.91	27.6
	0.05	56.25	29.2	50.15	28.6	44.71	28.1	39.86	27.7	35.53	27.3	31.68	26.9
	0.10	44.01	28.1	39.96	27.7	36.28	27.4	32.93	27.0	29.90	26.8	27.15	26.5
	0.15	36.13	27.3	33.22	27.1	30.55	26.8	28.09	26.6	25.83	26.4	23.76	26.2
22	0.00	92.16	30.5	80.28	29.4	69.93	28.5	60.92	27.6	53.06	26.9	46.22	26.3
	0.05	66.82	28.2	59.57	27.5	53.11	26.9	47.34	26.4	42.21	25.9	37.63	25.5
	0.10	52.28	26.8	47.46	26.4	43.09	26.0	39.12	25.6	35.52	25.3	32.25	25.0
	0.15	42.91	26.0	39.46	25.7	36.29	25.4	33.37	25.1	30.69	24.8	28.22	24.6
20	0.00	106.68	29.9	92.92	28.6	80.95	27.5	70.51	26.5	61.42	25.7	53.50	25.0
	0.05	77.34	27.2	68.95	26.4	61.47	25.7	54.80	25.1	48.85	24.5	43.55	24.0
	0.10	60.51	25.6	54.94	25.1	49.88	24.6	45.28	24.2	41.11	23.8	37.32	23.5
	0.15	49.67	24.6	45.68	24.2	42.00	23.9	38.63	23.6	35.52	23.3	32.66	23.0
18	0.00	121.15	29.2	105.53	27.8	91.93	26.5	80.08	25.4	69.76	24.5	60.76	23.6
	0.05	87.84	26.1	78.31	25.3	69.81	24.5	62.24	23.8	55.48	23.1	49.46	22.6
	0.10	68.72	24.4	62.39	23.8	56.65	23.2	51.43	22.8	46.69	22.3	42.39	21.9
	0.15	56.41	23.2	51.88	22.8	47.71	22.4	43.87	22.1	40.34	21.7	37.10	21.4
15	0.00	142.82	28.2	124.41	26.5	108.37	25.0	94.40	23.7	82.23	22.6	71.63	21.6
	0.05	103.55	24.6	92.31	23.5	82.30	22.6	73.37	21.8	65.41	21.1	58.31	20.4
	0.10	81.02	22.5	73.55	21.8	66.78	21.2	60.63	20.6	55.04	20.1	49.97	19.6
	0.15	66.50	21.2	61.16	20.7	56.24	20.2	51.72	19.8	47.56	19.4	43.73	19.0

Tab 14. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 20×2.0; $t_{fm} = 40^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	113.92	34.5	99.23	33.2	86.44	32.0	75.30	31.0	65.59	30.1	57.14	29.3
	0.05	82.59	31.6	73.63	30.8	65.64	30.1	58.52	29.4	52.17	28.8	46.51	28.3
	0.10	64.62	30.0	58.67	29.4	53.26	28.9	48.36	28.5	43.90	28.1	39.86	27.7
	0.15	53.04	28.9	48.78	28.5	44.86	28.2	41.25	27.8	37.93	27.5	34.88	27.2
22	0.00	128.38	33.9	111.83	32.4	97.42	31.0	84.86	29.9	73.92	28.8	64.39	28.0
	0.05	93.08	30.6	82.98	29.7	73.98	28.8	65.95	28.1	58.79	27.4	52.42	26.9
	0.10	72.82	28.7	66.12	28.1	60.03	27.6	54.50	27.0	49.48	26.6	44.92	26.2
	0.15	59.78	27.5	54.97	27.1	50.55	26.7	46.49	26.3	42.75	26.0	39.31	25.6
20	0.00	142.82	33.2	124.41	31.5	108.37	30.0	94.40	28.7	82.23	27.6	71.63	26.6
	0.05	103.55	29.6	92.31	28.5	82.30	27.6	73.37	26.8	65.41	26.1	58.31	25.4
	0.10	81.02	27.5	73.55	26.8	66.78	26.2	60.63	25.6	55.04	25.1	49.97	24.6
	0.15	66.50	26.2	61.16	25.7	56.24	25.2	51.72	24.8	47.56	24.4	43.73	24.0
18	0.00	157.25	32.6	136.98	30.7	119.32	29.0	103.94	27.6	90.54	26.4	78.87	25.3
	0.05	114.01	28.6	101.64	27.4	90.61	26.4	80.78	25.5	72.02	24.7	64.20	23.9
	0.10	89.20	26.3	80.98	25.5	73.52	24.8	66.75	24.2	60.60	23.6	55.02	23.1
	0.15	73.22	24.8	67.33	24.2	61.92	23.7	56.94	23.3	52.36	22.8	48.15	22.5
15	0.00	178.87	31.6	155.81	29.4	135.72	27.6	118.23	25.9	102.99	24.5	89.71	23.3
	0.05	129.68	27.0	115.61	25.7	103.07	24.5	91.89	23.5	81.92	22.6	73.03	21.8
	0.10	101.46	24.4	92.12	23.5	83.63	22.7	75.93	22.0	68.93	21.4	62.58	20.8
	0.15	83.29	22.7	76.59	22.1	70.43	21.5	64.77	21.0	59.56	20.5	54.77	20.1

Tab 15. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 20×2.0; $t_{fm} = 45^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	150.04	37.9	130.70	36.1	113.85	34.5	99.17	33.2	86.39	32.0	75.25	31.0
	0.05	108.78	34.1	96.98	33.0	86.46	32.0	77.08	31.1	68.71	30.4	61.26	29.7
	0.10	85.11	31.9	77.27	31.2	70.15	30.5	63.69	29.9	57.82	29.4	52.50	28.9
	0.15	69.86	30.5	64.25	29.9	59.08	29.5	54.33	29.0	49.96	28.6	45.94	28.3
22	0.00	164.46	37.2	143.26	35.3	124.79	33.6	108.70	32.1	94.69	30.8	82.48	29.6
	0.05	119.23	33.0	106.30	31.8	94.76	30.8	84.48	29.8	75.32	29.0	67.14	28.2
	0.10	93.29	30.6	84.70	29.8	76.89	29.1	69.81	28.5	63.38	27.9	57.54	27.3
	0.15	76.58	29.1	70.42	28.5	64.76	28.0	59.55	27.5	54.76	27.1	50.36	26.7
20	0.00	178.87	36.6	155.81	34.4	135.72	32.6	118.23	30.9	102.99	29.5	89.71	28.3
	0.05	129.68	32.0	115.61	30.7	103.07	29.5	91.89	28.5	81.92	27.6	73.03	26.8
	0.10	101.46	29.4	92.12	28.5	83.63	27.7	75.93	27.0	68.93	26.4	62.58	25.8
	0.15	83.29	27.7	76.59	27.1	70.43	26.5	64.77	26.0	59.56	25.5	54.77	25.1
18	0.00	193.27	35.9	168.35	33.6	146.65	31.6	127.75	29.8	111.28	28.3	96.93	27.0
	0.05	140.12	31.0	124.92	29.6	111.37	28.3	99.28	27.2	88.51	26.2	78.91	25.3
	0.10	109.63	28.2	99.53	27.2	90.36	26.4	82.04	25.6	74.48	24.9	67.62	24.3
	0.15	89.99	26.3	82.76	25.7	76.10	25.0	69.98	24.5	64.35	24.0	59.18	23.5
15	0.00	214.86	34.9	187.16	32.3	163.04	30.1	142.02	28.1	123.71	26.5	107.76	25.0
	0.05	155.78	29.4	138.88	27.9	123.81	26.5	110.38	25.2	98.40	24.1	87.72	23.1
	0.10	121.88	26.3	110.65	25.2	100.46	24.3	91.21	23.4	82.80	22.7	75.18	22.0
	0.15	100.05	24.3	92.00	23.5	84.60	22.8	77.80	22.2	71.54	21.6	65.79	21.1

Tab 16. Floor Heating Performance - concrete slab layer 4.5 cm over the pipe - Diameter 20×2.0; $t_{fm} = 50^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	186.07	41.2	162.08	39.0	141.19	37.1	122.99	35.4	107.13	33.9	93.32	32.6
	0.05	134.90	36.5	120.27	35.1	107.22	33.9	95.58	32.9	85.21	31.9	75.97	31.0
	0.10	105.55	33.8	95.83	32.9	87.00	32.1	78.98	31.3	71.71	30.6	65.10	30.0
	0.15	86.64	32.0	79.67	31.4	73.27	30.8	67.38	30.2	61.96	29.7	56.97	29.3
22	0.00	200.47	40.6	174.62	38.2	152.11	36.1	132.51	34.3	115.42	32.7	100.54	31.3
	0.05	145.34	35.5	129.57	34.0	115.51	32.7	102.98	31.5	91.81	30.5	81.85	29.6
	0.10	113.72	32.5	103.24	31.6	93.73	30.7	85.10	29.9	77.26	29.2	70.14	28.5
	0.15	93.35	30.6	85.84	29.9	78.94	29.3	72.59	28.7	66.75	28.2	61.38	27.7
20	0.00	214.86	39.9	187.16	37.3	163.04	35.1	142.02	33.1	123.71	31.5	107.76	30.0
	0.05	155.78	34.4	138.88	32.9	123.81	31.5	110.38	30.2	98.40	29.1	87.72	28.1
	0.10	121.88	31.3	110.65	30.2	100.46	29.3	91.21	28.4	82.80	27.7	75.18	27.0
	0.15	100.05	29.3	92.00	28.5	84.60	27.8	77.80	27.2	71.54	26.6	65.79	26.1
18	0.00	229.25	39.2	199.70	36.5	173.95	34.1	151.53	32.0	132.00	30.2	114.98	28.6
	0.05	166.21	33.4	148.18	31.7	132.10	30.2	117.77	28.9	104.99	27.7	93.60	26.7
	0.10	130.04	30.0	118.06	28.9	107.19	27.9	97.31	27.0	88.35	26.2	80.21	25.4
	0.15	106.75	27.9	98.16	27.1	90.27	26.4	83.01	25.7	76.34	25.1	70.20	24.5
15	0.00	250.83	38.2	218.49	35.2	190.33	32.6	165.79	30.4	144.42	28.4	125.80	26.6
	0.05	181.85	31.8	162.12	30.0	144.53	28.4	128.85	26.9	114.87	25.6	102.41	24.5
	0.10	142.28	28.2	129.18	27.0	117.28	25.9	106.47	24.9	96.66	24.0	87.76	23.1
	0.15	116.80	25.8	107.40	24.9	98.77	24.1	90.82	23.4	83.52	22.7	76.80	22.1

Tab 17. Ceiling Heating Performance - plaster 2 cm - Diameter 14x2.0; $t_{fm} = 35^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	81.35	36.5	68.83	34.6	58.67	33.0	50.38	31.8	43.57	30.7	37.44	29.8
	0.05	62.81	33.7	54.70	32.4	47.94	31.4	42.17	30.5	37.33	29.7	32.77	29.0
	0.10	50.90	31.8	45.36	31.0	40.61	30.2	36.42	29.6	32.86	29.1	29.42	28.5
	0.15	42.93	30.6	38.94	30.0	35.39	29.4	32.17	28.9	29.41	28.5	26.68	28.1
22	0.00	96.63	36.9	81.76	34.6	69.69	32.7	59.85	31.2	51.76	30.0	44.47	28.8
	0.05	74.60	33.5	64.97	32.0	56.95	30.8	50.09	29.7	44.34	28.8	38.92	28.0
	0.10	60.47	31.3	53.89	30.3	48.24	29.4	43.27	28.7	39.03	28.0	34.95	27.4
	0.15	51.00	29.8	46.26	29.1	42.04	28.5	38.21	27.9	34.93	27.4	31.69	26.9
20	0.00	111.85	37.2	94.63	34.6	80.67	32.4	69.27	30.7	59.91	29.2	51.47	27.9
	0.05	86.35	33.3	75.21	31.6	65.92	30.1	57.98	28.9	51.32	27.9	45.05	26.9
	0.10	69.99	30.8	62.37	29.6	55.83	28.6	50.08	27.7	45.18	27.0	40.45	26.2
	0.15	59.03	29.1	53.54	28.2	48.66	27.5	44.23	26.8	40.44	26.2	36.68	25.6
18	0.00	127.03	37.5	107.47	34.5	91.62	32.1	78.67	30.1	68.04	28.5	58.46	27.0
	0.05	98.07	33.1	85.41	31.1	74.87	29.5	65.85	28.1	58.28	27.0	51.17	25.9
	0.10	79.49	30.2	70.84	28.9	63.41	27.8	56.88	26.8	51.31	25.9	45.94	25.1
	0.15	67.04	28.3	60.81	27.4	55.27	26.5	50.23	25.7	45.92	25.1	41.66	24.4
15	0.00	149.75	38.0	126.70	34.5	108.01	31.6	92.75	29.3	80.21	27.3	68.91	25.6
	0.05	115.61	32.8	100.69	30.5	88.26	28.6	77.63	26.9	68.71	25.6	60.32	24.3
	0.10	93.71	29.4	83.51	27.8	74.75	26.5	67.05	25.3	60.49	24.3	54.16	23.3
	0.15	79.03	27.2	71.68	26.0	65.15	25.0	59.22	24.1	54.14	23.3	49.11	22.6

Tab 18. Ceiling Heating Performance - plaster 2 cm - Diameter 14x2.0; $t_{fm} = 40^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	119.44	42.4	101.06	39.5	86.15	37.3	73.98	35.4	63.98	33.8	54.97	32.5
	0.05	92.21	38.2	80.31	36.4	70.40	34.8	61.92	33.5	54.80	32.4	48.11	31.4
	0.10	74.74	35.5	66.61	34.2	59.62	33.2	53.48	32.2	48.25	31.4	43.20	30.6
	0.15	63.04	33.7	57.18	32.8	51.97	32.0	47.23	31.3	43.18	30.6	39.17	30.0
22	0.00	134.61	42.7	113.89	39.5	97.08	36.9	83.37	34.8	72.10	33.1	61.94	31.5
	0.05	103.92	38.0	90.51	35.9	79.33	34.2	69.78	32.7	61.76	31.5	54.22	30.3
	0.10	84.23	35.0	75.06	33.5	67.19	32.3	60.27	31.3	54.38	30.4	48.68	29.5
	0.15	71.04	32.9	64.43	31.9	58.56	31.0	53.23	30.2	48.66	29.5	44.15	28.8
20	0.00	149.75	43.0	126.70	39.5	108.01	36.6	92.75	34.3	80.21	32.3	68.91	30.6
	0.05	115.61	37.8	100.69	35.5	88.26	33.6	77.63	31.9	68.71	30.6	60.32	29.3
	0.10	93.71	34.4	83.51	32.8	74.75	31.5	67.05	30.3	60.49	29.3	54.16	28.3
	0.15	79.03	32.2	71.68	31.0	65.15	30.0	59.22	29.1	54.14	28.3	49.11	27.6
18	0.00	164.87	43.4	139.50	39.5	118.92	36.3	102.11	33.7	88.32	31.6	75.87	29.7
	0.05	127.29	37.6	110.86	35.1	97.17	32.9	85.47	31.1	75.65	29.6	66.41	28.2
	0.10	103.17	33.9	91.94	32.1	82.30	30.7	73.82	29.4	66.60	28.2	59.63	27.2
	0.15	87.01	31.4	78.92	30.1	71.73	29.0	65.20	28.0	59.61	27.2	54.07	26.3
15	0.00	187.54	43.9	158.67	39.4	135.26	35.8	116.15	32.9	100.46	30.5	86.30	28.3
	0.05	144.79	37.3	126.10	34.4	110.53	32.0	97.22	30.0	86.05	28.2	75.54	26.6
	0.10	117.36	33.1	104.58	31.1	93.62	29.4	83.97	27.9	75.76	26.7	67.82	25.4
	0.15	98.97	30.2	89.77	28.8	81.59	27.6	74.16	26.4	67.80	25.4	61.51	24.5

Tab 19. Ceiling Heating Performance - plaster 2 cm - Diameter 14x2.0; $t_{fm} = 45^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	157.31	48.2	133.10	44.5	113.46	41.5	97.43	39.0	84.27	37.0	72.39	35.1
	0.05	121.45	42.7	105.78	40.3	92.72	38.3	81.55	36.5	72.18	35.1	63.37	33.7
	0.10	98.44	39.1	87.73	37.5	78.53	36.1	70.44	34.8	63.55	33.8	56.89	32.8
	0.15	83.02	36.8	75.30	35.6	68.44	34.5	62.21	33.6	56.87	32.7	51.59	31.9
22	0.00	172.43	48.5	145.89	44.4	124.37	41.1	106.79	38.4	92.36	36.2	79.35	34.2
	0.05	133.13	42.5	115.94	39.8	101.63	37.6	89.39	35.8	79.12	34.2	69.46	32.7
	0.10	107.90	38.6	96.16	36.8	86.08	35.2	77.21	33.9	69.66	32.7	62.36	31.6
	0.15	91.00	36.0	82.54	34.7	75.02	33.5	68.19	32.5	62.34	31.6	56.55	30.7
20	0.00	187.54	48.9	158.67	44.4	135.26	40.8	116.15	37.9	100.46	35.5	86.30	33.3
	0.05	144.79	42.3	126.10	39.4	110.53	37.0	97.22	35.0	86.05	33.2	75.54	31.6
	0.10	117.36	38.1	104.58	36.1	93.62	34.4	83.97	32.9	75.76	31.7	67.82	30.4
	0.15	98.97	35.2	89.77	33.8	81.59	32.6	74.16	31.4	67.80	30.4	61.51	29.5
18	0.00	202.64	49.2	171.45	44.4	146.15	40.5	125.50	37.3	108.55	34.7	93.25	32.3
	0.05	156.45	42.1	136.25	39.0	119.43	36.4	105.05	34.2	92.98	32.3	81.63	30.6
	0.10	126.80	37.5	113.00	35.4	101.16	33.6	90.73	32.0	81.86	30.6	73.28	29.3
	0.15	106.94	34.5	97.00	32.9	88.16	31.6	80.13	30.3	73.26	29.3	66.46	28.2
15	0.00	225.28	49.7	190.60	44.3	162.48	40.0	139.52	36.5	120.67	33.6	103.67	30.9
	0.05	173.93	41.8	151.48	38.3	132.77	35.4	116.78	33.0	103.37	30.9	90.75	29.0
	0.10	140.97	36.7	125.63	34.3	112.46	32.3	100.87	30.5	91.00	29.0	81.47	27.5
	0.15	118.89	33.3	107.84	31.6	98.01	30.1	89.08	28.7	81.44	27.5	73.89	26.4

Tab 20. Ceiling Heating Performance - plaster 2 cm - Diameter 14x2.0; $t_{fm} = 50^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	195.09	54.0	165.06	49.4	140.71	45.6	120.83	42.6	104.50	40.1	89.78	37.8
	0.05	150.62	47.2	131.18	44.2	114.98	41.7	101.13	39.6	89.51	37.8	78.59	36.1
	0.10	122.08	42.8	108.79	40.7	97.39	39.0	87.35	37.4	78.81	36.1	70.55	34.9
	0.15	102.96	39.8	93.39	38.4	84.88	37.1	77.15	35.9	70.53	34.9	63.98	33.8
22	0.00	210.19	54.3	177.83	49.4	151.60	45.3	130.18	42.0	112.59	39.3	96.73	36.9
	0.05	162.28	47.0	141.33	43.7	123.88	41.1	108.96	38.8	96.44	36.8	84.67	35.0
	0.10	131.53	42.2	117.21	40.0	104.92	38.1	94.11	36.5	84.91	35.1	76.01	33.7
	0.15	110.93	39.1	100.62	37.5	91.45	36.1	83.12	34.8	75.99	33.7	68.94	32.6
20	0.00	225.28	54.7	190.60	49.3	162.48	45.0	139.52	41.5	120.67	38.6	103.67	35.9
	0.05	173.93	46.8	151.48	43.3	132.77	40.4	116.78	38.0	103.37	35.9	90.75	34.0
	0.10	140.97	41.7	125.63	39.3	112.46	37.3	100.87	35.5	91.00	34.0	81.47	32.5
	0.15	118.89	38.3	107.84	36.6	98.01	35.1	89.08	33.7	81.44	32.5	73.89	31.4
18	0.00	240.36	55.0	203.37	49.3	173.36	44.7	148.87	40.9	128.75	37.8	110.61	35.0
	0.05	185.57	46.5	161.62	42.9	141.67	39.8	124.60	37.2	110.29	35.0	96.82	32.9
	0.10	150.41	41.1	134.04	38.6	119.99	36.5	107.62	34.6	97.10	32.9	86.93	31.4
	0.15	126.85	37.5	115.06	35.7	104.58	34.1	95.05	32.6	86.90	31.4	78.83	30.1
15	0.00	262.99	55.5	222.51	49.2	189.68	44.2	162.88	40.1	140.87	36.7	121.02	33.6
	0.05	203.04	46.2	176.83	42.2	155.00	38.8	136.33	36.0	120.67	33.6	105.93	31.3
	0.10	164.57	40.3	146.66	37.6	131.28	35.2	117.75	33.1	106.24	31.3	95.11	29.6
	0.15	138.79	36.4	125.89	34.4	114.42	32.6	103.99	31.0	95.08	29.6	86.25	28.3

Tab 21. Ceiling Heating Performance - plaster 2 cm - Diameter 16×2.0; $t_{fm} = 35^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	81.88	36.6	69.82	34.7	59.83	33.2	51.53	31.9	44.63	30.9	38.41	29.9
	0.05	63.21	33.7	55.38	32.5	48.75	31.5	43.01	30.6	38.12	29.9	33.56	29.2
	0.10	51.21	31.9	45.86	31.1	41.19	30.3	37.06	29.7	33.48	29.2	30.06	28.6
	0.15	43.17	30.6	39.29	30.0	35.81	29.5	32.65	29.0	29.89	28.6	27.20	28.2
22	0.00	97.26	37.0	82.93	34.8	71.07	32.9	61.21	31.4	53.01	30.2	45.63	29.0
	0.05	75.09	33.6	65.78	32.1	57.91	30.9	51.08	29.9	45.28	29.0	39.87	28.1
	0.10	60.83	31.4	54.47	30.4	48.93	29.5	44.02	28.8	39.77	28.1	35.71	27.5
	0.15	51.28	29.9	46.67	29.2	42.54	28.5	38.78	28.0	35.51	27.5	32.30	27.0
20	0.00	112.57	37.3	95.99	34.8	82.27	32.7	70.85	30.9	61.36	29.4	52.82	28.1
	0.05	86.91	33.4	76.14	31.7	67.03	30.3	59.13	29.1	52.41	28.1	46.14	27.1
	0.10	70.41	30.8	63.05	29.7	56.64	28.7	50.95	27.8	46.03	27.1	41.33	26.4
	0.15	59.35	29.1	54.02	28.3	49.24	27.6	44.89	26.9	41.10	26.3	37.39	25.8
18	0.00	127.85	37.7	109.02	34.8	93.43	32.4	80.46	30.4	69.69	28.7	59.99	27.2
	0.05	98.71	33.2	86.47	31.3	76.13	29.7	67.15	28.3	59.52	27.2	52.41	26.1
	0.10	79.96	30.3	71.61	29.0	64.32	27.9	57.86	26.9	52.28	26.0	46.94	25.2
	0.15	67.41	28.4	61.35	27.4	55.92	26.6	50.98	25.8	46.68	25.2	42.47	24.5
15	0.00	150.72	38.2	128.52	34.8	110.14	31.9	94.85	29.6	82.16	27.6	70.71	25.9
	0.05	116.36	32.9	101.94	30.7	89.75	28.8	79.17	27.2	70.17	25.8	61.78	24.5
	0.10	94.27	29.5	84.42	28.0	75.83	26.7	68.21	25.5	61.63	24.5	55.33	23.5
	0.15	79.46	27.2	72.33	26.1	65.93	25.1	60.10	24.2	55.02	23.5	50.06	22.7

Tab 22. Ceiling Heating Performance - plaster 2 cm - Diameter 16×2.0; $t_{fm} = 40^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	120.22	42.5	102.51	39.8	87.85	37.5	75.66	35.6	65.53	34.1	56.40	32.7
	0.05	92.81	38.3	81.31	36.5	71.58	35.0	63.14	33.7	55.97	32.6	49.28	31.6
	0.10	75.19	35.6	67.34	34.4	60.48	33.3	54.41	32.4	49.16	31.6	44.14	30.8
	0.15	63.38	33.8	57.69	32.9	52.59	32.1	47.93	31.4	43.89	30.8	39.93	30.1
22	0.00	135.48	42.8	115.53	39.8	99.01	37.2	85.26	35.1	73.85	33.4	63.56	31.8
	0.05	104.60	38.1	91.63	36.1	80.67	34.4	71.16	32.9	63.08	31.7	55.53	30.5
	0.10	84.73	35.0	75.88	33.7	68.16	32.5	61.32	31.4	55.40	30.5	49.74	29.7
	0.15	71.43	33.0	65.01	32.0	59.26	31.1	54.02	30.3	49.46	29.6	45.00	28.9
20	0.00	150.72	43.2	128.52	39.8	110.14	36.9	94.85	34.6	82.16	32.6	70.71	30.9
	0.05	116.36	37.9	101.94	35.7	89.75	33.8	79.17	32.2	70.17	30.8	61.78	29.5
	0.10	94.27	34.5	84.42	33.0	75.83	31.7	68.21	30.5	61.63	29.5	55.33	28.5
	0.15	79.46	32.2	72.33	31.1	65.93	30.1	60.10	29.2	55.02	28.5	50.06	27.7
18	0.00	165.94	43.5	141.50	39.8	121.27	36.7	104.44	34.1	90.45	31.9	77.86	30.0
	0.05	128.12	37.7	112.24	35.3	98.81	33.2	87.16	31.4	77.26	29.9	68.02	28.5
	0.10	103.79	34.0	92.95	32.3	83.49	30.8	75.10	29.6	67.86	28.4	60.92	27.4
	0.15	87.49	31.5	79.63	30.3	72.59	29.2	66.17	28.2	60.58	27.3	55.12	26.5
15	0.00	188.75	44.0	160.96	39.8	137.94	36.2	118.79	33.3	102.89	30.8	88.56	28.6
	0.05	145.73	37.4	127.67	34.6	112.39	32.3	99.15	30.3	87.88	28.5	77.37	26.9
	0.10	118.06	33.2	105.73	31.3	94.97	29.6	85.43	28.1	77.18	26.9	69.30	25.7
	0.15	99.52	30.3	90.58	28.9	82.57	27.7	75.26	26.6	68.91	25.6	62.70	24.6

Tab 23. Ceiling Heating Performance - plaster 2 cm - Diameter 16×2.0; $t_{fm} = 45^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	158.33	48.4	135.01	44.8	115.71	41.8	99.65	39.3	86.31	37.3	74.29	35.4
	0.05	122.24	42.8	107.09	40.5	94.28	38.5	83.17	36.8	73.72	35.3	64.90	34.0
	0.10	99.03	39.2	88.68	37.6	79.66	36.3	71.66	35.0	64.74	34.0	58.13	32.9
	0.15	83.48	36.8	75.98	35.7	69.26	34.7	63.13	33.7	57.80	32.9	52.59	32.1
22	0.00	173.55	48.7	147.99	44.8	126.83	41.5	109.22	38.8	94.60	36.6	81.43	34.5
	0.05	133.99	42.6	117.38	40.1	103.34	37.9	91.16	36.0	80.80	34.4	71.14	32.9
	0.10	108.55	38.7	97.21	37.0	87.32	35.4	78.55	34.1	70.97	32.9	63.72	31.8
	0.15	91.50	36.1	83.28	34.8	75.91	33.7	69.20	32.6	63.36	31.7	57.64	30.9
20	0.00	188.75	49.0	160.96	44.8	137.94	41.2	118.79	38.3	102.89	35.8	88.56	33.6
	0.05	145.73	42.4	127.67	39.6	112.39	37.3	99.15	35.3	87.88	33.5	77.37	31.9
	0.10	118.06	38.2	105.73	36.3	94.97	34.6	85.43	33.1	77.18	31.9	69.30	30.7
	0.15	99.52	35.3	90.58	33.9	82.57	32.7	75.26	31.6	68.91	30.6	62.70	29.6
18	0.00	203.95	49.4	173.92	44.8	149.05	40.9	128.36	37.7	111.17	35.1	95.69	32.7
	0.05	157.46	42.2	137.95	39.2	121.44	36.7	107.13	34.5	94.96	32.6	83.60	30.9
	0.10	127.56	37.6	114.24	35.6	102.61	33.8	92.31	32.2	83.40	30.8	74.88	29.5
	0.15	107.53	34.5	97.87	33.1	89.21	31.7	81.32	30.5	74.46	29.5	67.74	28.4
15	0.00	226.74	49.9	193.35	44.7	165.70	40.5	142.70	37.0	123.59	34.0	106.38	31.4
	0.05	175.05	41.9	153.36	38.6	135.01	35.8	119.10	33.3	105.56	31.2	92.94	29.3
	0.10	141.81	36.8	127.00	34.5	114.08	32.6	102.62	30.8	92.72	29.3	83.24	27.8
	0.15	119.54	33.4	108.81	31.7	99.18	30.3	90.41	28.9	82.78	27.7	75.31	26.6

Tab 24. Ceiling Heating Performance - plaster 2 cm - Diameter 16×2.0; $t_{fm} = 50^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	196.35	54.2	167.44	49.8	143.50	46.1	123.58	43.0	107.03	40.5	92.13	38.2
	0.05	151.60	47.3	132.81	44.4	116.92	42.0	103.14	39.9	91.42	38.1	80.49	36.4
	0.10	122.81	42.9	109.98	40.9	98.79	39.2	88.87	37.7	80.29	36.4	72.09	35.1
	0.15	103.52	39.9	94.23	38.5	85.89	37.2	78.29	36.0	71.68	35.0	65.22	34.0
22	0.00	211.55	54.5	180.39	49.8	154.60	45.8	133.14	42.5	115.31	39.7	99.26	37.3
	0.05	163.33	47.1	143.08	44.0	125.97	41.4	111.12	39.1	98.49	37.2	86.72	35.3
	0.10	132.31	42.4	118.49	40.2	106.43	38.4	95.74	36.7	86.51	35.3	77.67	33.9
	0.15	111.54	39.2	101.52	37.6	92.54	36.2	84.35	35.0	77.23	33.9	70.27	32.8
20	0.00	226.74	54.9	193.35	49.7	165.70	45.5	142.70	42.0	123.59	39.0	106.38	36.4
	0.05	175.05	46.9	153.36	43.6	135.01	40.8	119.10	38.3	105.56	36.2	92.94	34.3
	0.10	141.81	41.8	127.00	39.5	114.08	37.6	102.62	35.8	92.72	34.3	83.24	32.8
	0.15	119.54	38.4	108.81	36.7	99.18	35.3	90.41	33.9	82.78	32.7	75.31	31.6
18	0.00	241.92	55.2	206.29	49.7	176.80	45.2	152.25	41.4	131.87	38.3	113.51	35.5
	0.05	186.78	46.7	163.63	43.2	144.05	40.2	127.07	37.5	112.63	35.3	99.17	33.3
	0.10	151.31	41.3	135.51	38.8	121.72	36.7	109.49	34.8	98.93	33.2	88.82	31.7
	0.15	127.55	37.6	116.09	35.9	105.82	34.3	96.46	32.8	88.32	31.6	80.36	30.4
15	0.00	264.69	55.7	225.71	49.7	193.44	44.8	166.58	40.6	144.28	37.2	124.19	34.1
	0.05	204.36	46.4	179.03	42.5	157.61	39.2	139.03	36.4	123.23	34.0	108.50	31.7
	0.10	165.55	40.5	148.26	37.8	133.17	35.5	119.80	33.4	108.24	31.7	97.18	30.0
	0.15	139.55	36.5	127.02	34.5	115.78	32.8	105.54	31.2	96.63	29.9	87.92	28.5

Tab 25. Ceiling Heating Performance - plaster 2 cm - Diameter 18×2.0; $t_{fm} = 35^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05			0.10			0.15			0.20			0.25			0.30		
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s		
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]		
24	0.00	82.41	36.7	70.82	34.9	61.02	33.4	52.70	32.1	45.71	31.0	39.42	30.1						
	0.05	63.62	33.8	56.07	32.6	49.57	31.6	43.86	30.7	38.93	30.0	34.37	29.3						
	0.10	51.52	31.9	46.36	31.1	41.79	30.4	37.70	29.8	34.11	29.2	30.71	28.7						
	0.15	43.40	30.7	39.64	30.1	36.24	29.6	33.13	29.1	30.38	28.7	27.72	28.3						
22	0.00	97.89	37.1	84.13	34.9	72.48	33.2	62.60	31.6	54.30	30.4	46.82	29.2						
	0.05	75.57	33.6	66.60	32.2	58.89	31.1	52.10	30.0	46.24	29.1	40.83	28.3						
	0.10	61.19	31.4	55.07	30.5	49.64	29.6	44.78	28.9	40.52	28.2	36.48	27.6						
	0.15	51.56	29.9	47.09	29.2	43.05	28.6	39.36	28.1	36.09	27.6	32.93	27.1						
20	0.00	113.30	37.4	97.38	35.0	83.90	32.9	72.46	31.1	62.85	29.7	54.20	28.3						
	0.05	87.47	33.5	77.09	31.9	68.16	30.5	60.30	29.3	53.53	28.2	47.26	27.3						
	0.10	70.83	30.9	63.74	29.8	57.45	28.8	51.83	28.0	46.90	27.2	42.23	26.5						
	0.15	59.68	29.2	54.50	28.4	49.83	27.7	45.56	27.0	41.77	26.4	38.11	25.9						
18	0.00	128.68	37.8	110.59	35.0	95.28	32.7	82.29	30.7	71.38	29.0	61.55	27.5						
	0.05	99.35	33.3	87.55	31.5	77.41	29.9	68.48	28.5	60.79	27.4	53.68	26.3						
	0.10	80.44	30.4	72.40	29.1	65.25	28.0	58.87	27.1	53.26	26.2	47.96	25.4						
	0.15	67.78	28.4	61.90	27.5	56.59	26.7	51.74	26.0	47.44	25.3	43.29	24.7						
15	0.00	151.69	38.3	130.37	35.1	112.33	32.3	97.01	29.9	84.14	27.9	72.56	26.2						
	0.05	117.12	33.0	103.21	30.9	91.26	29.0	80.73	27.4	71.66	26.0	63.28	24.7						
	0.10	94.83	29.6	85.34	28.1	76.92	26.8	69.40	25.7	62.79	24.7	56.54	23.7						
	0.15	79.90	27.3	72.97	26.2	66.71	25.3	60.99	24.4	55.92	23.6	51.03	22.9						

Tab 26. Ceiling Heating Performance - plaster 2 cm - Diameter 18×2.0; $t_{fm} = 40^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05			0.10			0.15			0.20			0.25			0.30		
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s		
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]		
24	0.00	120.99	42.6	103.99	40.0	89.59	37.8	77.38	35.9	67.11	34.3	57.88	32.9						
	0.05	93.41	38.4	82.32	36.7	72.79	35.2	64.40	33.9	57.16	32.8	50.47	31.8						
	0.10	75.64	35.6	68.07	34.5	61.35	33.4	55.35	32.5	50.08	31.7	45.10	30.9						
	0.15	63.73	33.8	58.21	33.0	53.21	32.2	48.65	31.5	44.61	30.9	40.70	30.3						
22	0.00	136.36	43.0	117.19	40.0	100.97	37.5	87.20	35.4	75.64	33.6	65.23	32.0						
	0.05	105.27	38.2	92.77	36.3	82.03	34.6	72.57	33.2	64.42	31.9	56.88	30.8						
	0.10	85.24	35.1	76.71	33.8	69.14	32.6	62.38	31.6	56.44	30.7	50.82	29.8						
	0.15	71.82	33.0	65.59	32.1	59.97	31.2	54.82	30.4	50.27	29.7	45.87	29.1						
20	0.00	151.69	43.3	130.37	40.1	112.33	37.3	97.01	34.9	84.14	32.9	72.56	31.2						
	0.05	117.12	38.0	103.21	35.9	91.26	34.0	80.73	32.4	71.66	31.0	63.28	29.7						
	0.10	94.83	34.6	85.34	33.1	76.92	31.8	69.40	30.7	62.79	29.7	56.54	28.7						
	0.15	79.90	32.3	72.97	31.2	66.71	30.3	60.99	29.4	55.92	28.6	51.03	27.9						
18	0.00	167.02	43.7	143.54	40.1	123.67	37.0	106.81	34.4	92.64	32.3	79.89	30.3						
	0.05	128.95	37.8	113.63	35.5	100.48	33.5	88.89	31.7	78.90	30.1	69.67	28.7						
	0.10	104.41	34.1	93.96	32.5	84.69	31.0	76.41	29.8	69.13	28.6	62.25	27.6						
	0.15	87.97	31.5	80.34	30.4	73.45	29.3	67.15	28.3	61.57	27.5	56.18	26.6						
15	0.00	189.98	44.2	163.27	40.1	140.67	36.6	121.49	33.7	105.38	31.2	90.88	29.0						
	0.05	146.67	37.6	129.25	34.9	114.29	32.6	101.11	30.6	89.75	28.8	79.25	27.2						
	0.10	118.76	33.3	106.88	31.4	96.33	29.8	86.91	28.4	78.64	27.1	70.81	25.9						
	0.15	100.06	30.4	91.39	29.1	83.55	27.9	76.38	26.8	70.04	25.8	63.91	24.8						

Tab 27. Ceiling Heating Performance - plaster 2 cm - Diameter 18×2.0; $t_{fm} = 45^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	159.36	48.5	136.96	45.1	118.00	42.2	101.91	39.7	88.39	37.6	76.23	35.7
	0.05	123.03	42.9	108.42	40.7	95.87	38.7	84.81	37.0	75.28	35.6	66.47	34.2
	0.10	99.62	39.3	89.66	37.8	80.81	36.4	72.90	35.2	65.96	34.1	59.39	33.1
	0.15	83.93	36.9	76.66	35.8	70.08	34.8	64.07	33.9	58.75	33.0	53.61	32.2
22	0.00	174.67	48.9	150.12	45.1	129.34	41.9	111.71	39.2	96.89	36.9	83.56	34.9
	0.05	134.86	42.7	118.84	40.3	105.08	38.2	92.96	36.3	82.52	34.7	72.86	33.2
	0.10	109.20	38.8	98.27	37.1	88.57	35.6	79.91	34.3	72.30	33.1	65.10	32.0
	0.15	92.00	36.2	84.03	34.9	76.82	33.8	70.23	32.8	64.40	31.9	58.76	31.0
20	0.00	189.98	49.2	163.27	45.1	140.67	41.6	121.49	38.7	105.38	36.2	90.88	34.0
	0.05	146.67	42.6	129.25	39.9	114.29	37.6	101.11	35.6	89.75	33.8	79.25	32.2
	0.10	118.76	38.3	106.88	36.4	96.33	34.8	86.91	33.4	78.64	32.1	70.81	30.9
	0.15	100.06	35.4	91.39	34.1	83.55	32.9	76.38	31.8	70.04	30.8	63.91	29.8
18	0.00	205.27	49.6	176.42	45.1	152.00	41.4	131.28	38.2	113.86	35.5	98.19	33.1
	0.05	158.48	42.4	139.66	39.5	123.49	37.0	109.25	34.8	96.98	32.9	85.63	31.2
	0.10	128.33	37.7	115.49	35.8	104.09	34.0	93.91	32.4	84.97	31.1	76.51	29.8
	0.15	108.12	34.6	98.75	33.2	90.28	31.9	82.54	30.7	75.68	29.6	69.05	28.6
15	0.00	228.21	50.1	196.13	45.2	168.98	41.0	145.94	37.5	126.59	34.5	109.16	31.8
	0.05	176.19	42.1	155.26	38.9	137.29	36.1	121.46	33.7	107.81	31.6	95.19	29.6
	0.10	142.66	36.9	128.39	34.8	115.72	32.8	104.40	31.1	94.46	29.5	85.06	28.1
	0.15	120.20	33.5	109.78	31.9	100.36	30.4	91.76	29.1	84.13	27.9	76.77	26.8

Tab 28. Ceiling Heating Performance - plaster 2 cm - Diameter 18×2.0; $t_{fm} = 50^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	197.63	54.4	169.85	50.1	146.34	46.5	126.39	43.4	109.62	40.9	94.54	38.5
	0.05	152.58	47.5	134.46	44.7	118.89	42.3	105.18	40.2	93.36	38.4	82.44	36.7
	0.10	123.55	43.0	111.19	41.1	100.21	39.4	90.41	37.9	81.80	36.6	73.66	35.3
	0.15	104.09	40.0	95.07	38.6	86.92	37.4	79.46	36.2	72.86	35.2	66.48	34.2
22	0.00	212.92	54.8	182.99	50.2	157.66	46.3	136.17	42.9	118.11	40.2	101.85	37.7
	0.05	164.39	47.3	144.86	44.3	128.09	41.7	113.32	39.4	100.59	37.5	88.81	35.7
	0.10	133.11	42.5	119.79	40.4	107.97	38.6	97.41	37.0	88.13	35.6	79.36	34.2
	0.15	112.15	39.3	102.43	37.8	93.64	36.4	85.61	35.2	78.50	34.1	71.62	33.0
20	0.00	228.21	55.1	196.13	50.2	168.98	46.0	145.94	42.5	126.59	39.5	109.16	36.8
	0.05	176.19	47.1	155.26	43.9	137.29	41.1	121.46	38.7	107.81	36.6	95.19	34.6
	0.10	142.66	41.9	128.39	39.8	115.72	37.8	104.40	36.1	94.46	34.5	85.06	33.1
	0.15	120.20	38.5	109.78	36.9	100.36	35.4	91.76	34.1	84.13	32.9	76.77	31.8
18	0.00	243.49	55.5	209.26	50.2	180.30	45.7	155.72	42.0	135.06	38.8	116.48	35.9
	0.05	187.99	46.9	165.66	43.5	146.48	40.5	129.59	37.9	115.03	35.7	101.57	33.6
	0.10	152.22	41.4	136.99	39.1	123.47	37.0	111.39	35.1	100.79	33.5	90.75	32.0
	0.15	128.25	37.7	117.13	36.0	107.09	34.5	97.90	33.1	89.77	31.8	81.91	30.6
15	0.00	266.41	56.0	228.96	50.2	197.27	45.3	170.37	41.2	147.77	37.7	127.44	34.6
	0.05	205.68	46.6	181.25	42.9	160.27	39.7	141.79	36.8	125.86	34.4	111.13	32.1
	0.10	166.54	40.6	149.88	38.1	135.09	35.8	121.87	33.7	110.27	32.0	99.29	30.3
	0.15	140.32	36.6	128.16	34.7	117.16	33.0	107.11	31.5	98.21	30.1	89.62	28.8

Tab 29. Ceiling Heating Performance - plaster 2 cm - Diameter 20×2.0; $t_{fm} = 35^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	82.94	36.8	71.84	35.1	62.23	33.6	53.90	32.3	46.82	31.2	40.45	30.2
	0.05	64.03	33.9	56.76	32.7	50.41	31.8	44.73	30.9	39.76	30.1	35.21	29.4
	0.10	51.82	32.0	46.87	31.2	42.39	30.5	38.35	29.9	34.75	29.3	31.38	28.8
	0.15	43.64	30.7	40.00	30.2	36.67	29.6	33.63	29.2	30.88	28.8	28.26	28.3
22	0.00	98.52	37.2	85.34	35.1	73.92	33.4	64.02	31.8	55.61	30.6	48.05	29.4
	0.05	76.06	33.7	67.42	32.4	59.88	31.2	53.13	30.2	47.23	29.3	41.82	28.4
	0.10	61.56	31.5	55.67	30.6	50.35	29.7	45.56	29.0	41.28	28.4	37.28	27.7
	0.15	51.84	30.0	47.51	29.3	43.56	28.7	39.94	28.1	36.68	27.6	33.56	27.2
20	0.00	114.04	37.5	98.78	35.2	85.56	33.2	74.11	31.4	64.37	29.9	55.62	28.6
	0.05	88.04	33.5	78.04	32.0	69.31	30.7	61.50	29.5	54.67	28.4	48.41	27.4
	0.10	71.25	31.0	64.44	29.9	58.28	29.0	52.73	28.1	47.78	27.4	43.15	26.6
	0.15	60.00	29.2	54.99	28.5	50.42	27.8	46.23	27.1	42.45	26.5	38.85	26.0
18	0.00	129.51	37.9	112.18	35.3	97.17	32.9	84.16	30.9	73.10	29.2	63.16	27.7
	0.05	99.99	33.4	88.63	31.6	78.72	30.1	69.84	28.7	62.08	27.6	54.97	26.5
	0.10	80.92	30.4	73.19	29.3	66.19	28.2	59.89	27.2	54.27	26.3	49.00	25.5
	0.15	68.15	28.5	62.46	27.6	57.27	26.8	52.51	26.1	48.22	25.4	44.12	24.8
15	0.00	152.68	38.5	132.25	35.3	114.55	32.6	99.22	30.3	86.18	28.3	74.46	26.5
	0.05	117.87	33.1	104.49	31.1	92.80	29.3	82.33	27.7	73.19	26.3	64.81	25.0
	0.10	95.40	29.7	86.28	28.3	78.03	27.0	70.60	25.9	63.97	24.8	57.77	23.9
	0.15	80.34	27.4	73.63	26.3	67.51	25.4	61.90	24.5	56.84	23.7	52.01	23.0

Tab 30. Ceiling Heating Performance - plaster 2 cm - Diameter 20×2.0; $t_{fm} = 40^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	121.78	42.7	105.48	40.2	91.37	38.1	79.14	36.2	68.74	34.6	59.39	33.1
	0.05	94.02	38.5	83.34	36.8	74.02	35.4	65.67	34.1	58.38	33.0	51.69	32.0
	0.10	76.09	35.7	68.82	34.6	62.24	33.6	56.31	32.7	51.03	31.9	46.08	31.1
	0.15	64.08	33.9	58.73	33.0	53.85	32.3	49.37	31.6	45.34	31.0	41.49	30.4
22	0.00	137.24	43.1	118.88	40.3	102.97	37.8	89.19	35.7	77.47	33.9	66.93	32.3
	0.05	105.96	38.3	93.92	36.4	83.41	34.8	74.01	33.4	65.79	32.1	58.25	31.0
	0.10	85.75	35.2	77.55	33.9	70.14	32.8	63.46	31.8	57.50	30.8	51.93	30.0
	0.15	72.21	33.1	66.18	32.2	60.68	31.3	55.64	30.6	51.09	29.9	46.75	29.2
20	0.00	152.68	43.5	132.25	40.3	114.55	37.6	99.22	35.3	86.18	33.3	74.46	31.5
	0.05	117.87	38.1	104.49	36.1	92.80	34.3	82.33	32.7	73.19	31.3	64.81	30.0
	0.10	95.40	34.7	86.28	33.3	78.03	32.0	70.60	30.9	63.97	29.8	57.77	28.9
	0.15	80.34	32.4	73.63	31.3	67.51	30.4	61.90	29.5	56.84	28.7	52.01	28.0
18	0.00	168.10	43.9	145.61	40.4	126.12	37.4	109.24	34.8	94.89	32.6	81.98	30.6
	0.05	129.78	38.0	115.04	35.7	102.17	33.7	90.65	31.9	80.58	30.4	71.35	29.0
	0.10	105.03	34.2	94.99	32.6	85.91	31.2	77.73	30.0	70.43	28.8	63.60	27.8
	0.15	88.45	31.6	81.06	30.5	74.33	29.4	68.15	28.5	62.58	27.6	57.27	26.8
15	0.00	191.21	44.4	165.62	40.5	143.46	37.1	124.26	34.1	107.93	31.6	93.25	29.3
	0.05	147.62	37.7	130.86	35.1	116.22	32.9	103.11	30.9	91.66	29.1	81.16	27.5
	0.10	119.47	33.4	108.05	31.6	97.72	30.0	88.42	28.6	80.12	27.3	72.35	26.1
	0.15	100.61	30.5	92.21	29.2	84.55	28.0	77.52	26.9	71.18	26.0	65.14	25.0

Tab 31. Ceiling Heating Performance - plaster 2 cm - Diameter 20×2.0; $t_{fm} = 45^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	160.39	48.7	138.93	45.4	120.34	42.5	104.23	40.0	90.53	37.9	78.22	36.0
	0.05	123.83	43.1	109.77	40.9	97.48	39.0	86.49	37.3	76.89	35.8	68.08	34.5
	0.10	100.22	39.4	90.64	37.9	81.97	36.6	74.17	35.4	67.20	34.3	60.69	33.3
	0.15	84.40	37.0	77.35	35.9	70.92	34.9	65.03	34.0	59.71	33.2	54.64	32.4
22	0.00	175.80	49.0	152.28	45.4	131.90	42.3	114.25	39.6	99.24	37.3	85.74	35.2
	0.05	135.73	42.9	120.32	40.5	106.85	38.4	94.80	36.6	84.28	35.0	74.62	33.5
	0.10	109.85	38.9	99.35	37.3	89.85	35.8	81.30	34.5	73.66	33.3	66.52	32.2
	0.15	92.51	36.2	84.78	35.0	77.74	34.0	71.28	33.0	65.45	32.1	59.89	31.2
20	0.00	191.21	49.4	165.62	45.5	143.46	42.1	124.26	39.1	107.93	36.6	93.25	34.3
	0.05	147.62	42.7	130.86	40.1	116.22	37.9	103.11	35.9	91.66	34.1	81.16	32.5
	0.10	119.47	38.4	108.05	36.6	97.72	35.0	88.42	33.6	80.12	32.3	72.35	31.1
	0.15	100.61	35.5	92.21	34.2	84.55	33.0	77.52	31.9	71.18	31.0	65.14	30.0
18	0.00	206.60	49.8	178.96	45.5	155.01	41.8	134.26	38.7	116.62	35.9	100.76	33.5
	0.05	159.51	42.5	141.39	39.8	125.57	37.3	111.41	35.1	99.04	33.2	87.70	31.5
	0.10	129.09	37.9	116.75	36.0	105.59	34.2	95.54	32.7	86.57	31.3	78.17	30.0
	0.15	108.71	34.7	99.63	33.3	91.36	32.1	83.76	30.9	76.92	29.8	70.39	28.8
15	0.00	229.69	50.3	198.95	45.6	172.33	41.5	149.26	38.0	129.65	34.9	112.02	32.2
	0.05	177.33	42.3	157.19	39.2	139.60	36.5	123.86	34.1	110.10	31.9	97.50	30.0
	0.10	143.52	37.1	129.80	35.0	117.38	33.1	106.21	31.3	96.24	29.8	86.91	28.4
	0.15	120.86	33.6	110.76	32.0	101.56	30.6	93.12	29.3	85.51	28.2	78.25	27.0

Tab 32. Ceiling Heating Performance - plaster 2 cm - Diameter 20×2.0; $t_{fm} = 50^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	198.91	54.6	172.29	50.5	149.24	47.0	129.26	43.9	112.28	41.3	97.01	38.9
	0.05	153.57	47.6	136.13	44.9	120.90	42.6	107.26	40.5	95.35	38.7	84.43	37.0
	0.10	124.28	43.1	112.40	41.3	101.65	39.6	91.98	38.2	83.34	36.8	75.26	35.6
	0.15	104.66	40.1	95.92	38.8	87.95	37.5	80.64	36.4	74.05	35.4	67.76	34.4
22	0.00	214.30	55.0	185.63	50.6	160.78	46.7	139.26	43.4	120.96	40.6	104.52	38.1
	0.05	165.45	47.5	146.66	44.6	130.25	42.0	115.56	39.8	102.73	37.8	90.96	36.0
	0.10	133.90	42.6	121.10	40.6	109.52	38.8	99.10	37.2	89.79	35.8	81.09	34.5
	0.15	112.76	39.3	103.34	37.9	94.76	36.6	86.88	35.4	79.78	34.3	73.01	33.2
20	0.00	229.69	55.3	198.95	50.6	172.33	46.5	149.26	43.0	129.65	39.9	112.02	37.2
	0.05	177.33	47.3	157.19	44.2	139.60	41.5	123.86	39.1	110.10	36.9	97.50	35.0
	0.10	143.52	42.1	129.80	40.0	117.38	38.1	106.21	36.3	96.24	34.8	86.91	33.4
	0.15	120.86	38.6	110.76	37.0	101.56	35.6	93.12	34.3	85.51	33.2	78.25	32.0
18	0.00	245.07	55.7	212.28	50.7	183.87	46.3	159.26	42.5	138.33	39.3	119.52	36.4
	0.05	189.20	47.1	167.72	43.8	148.95	40.9	132.16	38.3	117.48	36.1	104.03	34.0
	0.10	153.13	41.6	138.49	39.3	125.25	37.3	113.32	35.4	102.68	33.8	92.73	32.3
	0.15	128.95	37.8	118.18	36.2	108.36	34.7	99.36	33.3	91.23	32.0	83.49	30.8
15	0.00	268.13	56.3	232.26	50.7	201.17	45.9	174.25	41.8	151.35	38.3	130.77	35.1
	0.05	207.01	46.8	183.50	43.2	162.97	40.1	144.59	37.2	128.53	34.8	113.82	32.5
	0.10	167.54	40.8	151.52	38.3	137.03	36.1	123.99	34.1	112.35	32.3	101.45	30.6
	0.15	141.09	36.7	129.30	34.9	118.56	33.2	108.71	31.7	99.82	30.4	91.35	29.1

Tab 33. Wall Heating Performance - plaster 2 cm - Diameter 12x2.0; $t_{fm} = 35^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	86.40	34.8	72.12	33.0	60.81	31.6	51.77	30.5	44.59	29.6	37.92	28.7
	0.05	62.51	31.8	53.81	30.7	46.78	29.8	40.83	29.1	35.99	28.5	31.29	27.9
	0.10	48.44	30.1	42.79	29.3	38.02	28.8	33.89	28.2	30.47	27.8	27.06	27.4
	0.15	39.72	29.0	35.79	28.5	32.33	28.0	29.22	27.7	26.63	27.3	23.98	27.0
22	0.00	102.63	34.8	85.67	32.7	72.24	31.0	61.50	29.7	52.96	28.6	45.05	27.6
	0.05	74.25	31.3	63.92	30.0	55.57	28.9	48.50	28.1	42.75	27.3	37.17	26.6
	0.10	57.53	29.2	50.82	28.4	45.17	27.6	40.26	27.0	36.20	26.5	32.14	26.0
	0.15	47.19	27.9	42.51	27.3	38.41	26.8	34.71	26.3	31.64	26.0	28.48	25.6
20	0.00	118.80	34.8	99.17	32.4	83.61	30.5	71.19	28.9	61.30	27.7	52.14	26.5
	0.05	85.94	30.7	73.99	29.2	64.32	28.0	56.14	27.0	49.48	26.2	43.02	25.4
	0.10	66.59	28.3	58.83	27.4	52.28	26.5	46.60	25.8	41.90	25.2	37.20	24.7
	0.15	54.62	26.8	49.20	26.2	44.46	25.6	40.17	25.0	36.62	24.6	32.96	24.1
18	0.00	134.92	34.9	112.62	32.1	94.96	29.9	80.85	28.1	69.62	26.7	59.22	25.4
	0.05	97.61	30.2	84.03	28.5	73.05	27.1	63.76	26.0	56.19	25.0	48.86	24.1
	0.10	75.63	27.5	66.81	26.4	59.38	25.4	52.92	24.6	47.59	23.9	42.25	23.3
	0.15	62.03	25.8	55.88	25.0	50.49	24.3	45.62	23.7	41.59	23.2	37.44	22.7
15	0.00	159.05	34.9	132.77	31.6	111.95	29.0	95.31	26.9	82.08	25.3	69.81	23.7
	0.05	115.06	29.4	99.06	27.4	86.12	25.8	75.17	24.4	66.24	23.3	57.60	22.2
	0.10	89.16	26.1	78.76	24.8	70.00	23.7	62.39	22.8	56.10	22.0	49.81	21.2
	0.15	73.12	24.1	65.87	23.2	59.52	22.4	53.79	21.7	49.03	21.1	44.13	20.5

Tab 34. Wall Heating Performance - plaster 2 cm - Diameter 12x2.0; $t_{fm} = 40^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	126.86	39.9	105.90	37.2	89.29	35.2	76.02	33.5	65.47	32.2	55.68	31.0
	0.05	91.78	35.5	79.01	33.9	68.69	32.6	59.95	31.5	52.84	30.6	45.94	29.7
	0.10	71.12	32.9	62.82	31.9	55.83	31.0	49.76	30.2	44.74	29.6	39.73	29.0
	0.15	58.32	31.3	52.54	30.6	47.48	29.9	42.90	29.4	39.11	28.9	35.20	28.4
22	0.00	142.97	39.9	119.34	36.9	100.63	34.6	85.67	32.7	73.78	31.2	62.75	29.8
	0.05	103.43	34.9	89.04	33.1	77.41	31.7	67.57	30.4	59.55	29.4	51.77	28.5
	0.10	80.14	32.0	70.80	30.8	62.92	29.9	56.08	29.0	50.42	28.3	44.77	27.6
	0.15	65.73	30.2	59.21	29.4	53.50	28.7	48.35	28.0	44.07	27.5	39.67	27.0
20	0.00	159.05	39.9	132.77	36.6	111.95	34.0	95.31	31.9	82.08	30.3	69.81	28.7
	0.05	115.06	34.4	99.06	32.4	86.12	30.8	75.17	29.4	66.24	28.3	57.60	27.2
	0.10	89.16	31.1	78.76	29.8	70.00	28.7	62.39	27.8	56.10	27.0	49.81	26.2
	0.15	73.12	29.1	65.87	28.2	59.52	27.4	53.79	26.7	49.03	26.1	44.13	25.5
18	0.00	175.11	39.9	146.18	36.3	123.25	33.4	104.93	31.1	90.37	29.3	76.86	27.6
	0.05	126.69	33.8	109.06	31.6	94.82	29.9	82.76	28.3	72.93	27.1	63.42	25.9
	0.10	98.17	30.3	86.72	28.8	77.07	27.6	68.69	26.6	61.76	25.7	54.84	24.9
	0.15	80.51	28.1	72.53	27.1	65.53	26.2	59.22	25.4	53.98	24.7	48.59	24.1
15	0.00	199.19	39.9	166.28	35.8	140.20	32.5	119.36	29.9	102.79	27.8	87.43	25.9
	0.05	144.10	33.0	124.05	30.5	107.85	28.5	94.14	26.8	82.96	25.4	72.13	24.0
	0.10	111.66	29.0	98.64	27.3	87.66	26.0	78.13	24.8	70.25	23.8	62.38	22.8
	0.15	91.58	26.4	82.50	25.3	74.54	24.3	67.36	23.4	61.40	22.7	55.27	21.9

Tab 35. Wall Heating Performance - plaster 2 cm - Diameter 12x2.0; $t_{fm} = 45^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	167.08	44.9	139.48	41.4	117.60	38.7	100.12	36.5	86.22	34.8	73.33	33.2
	0.05	120.88	39.1	104.06	37.0	90.47	35.3	78.96	33.9	69.59	32.7	60.51	31.6
	0.10	93.66	35.7	82.74	34.3	73.53	33.2	65.54	32.2	58.93	31.4	52.32	30.5
	0.15	76.82	33.6	69.20	32.7	62.53	31.8	56.50	31.1	51.51	30.4	46.36	29.8
22	0.00	183.14	44.9	152.88	41.1	128.90	38.1	109.74	35.7	94.51	33.8	80.38	32.0
	0.05	132.49	38.6	114.06	36.3	99.16	34.4	86.55	32.8	76.28	31.5	66.32	30.3
	0.10	102.67	34.8	90.69	33.3	80.60	32.1	71.84	31.0	64.59	30.1	57.35	29.2
	0.15	84.20	32.5	75.85	31.5	68.54	30.6	61.93	29.7	56.46	29.1	50.82	28.4
20	0.00	199.19	44.9	166.28	40.8	140.20	37.5	119.36	34.9	102.79	32.8	87.43	30.9
	0.05	144.10	38.0	124.05	35.5	107.85	33.5	94.14	31.8	82.96	30.4	72.13	29.0
	0.10	111.66	34.0	98.64	32.3	87.66	31.0	78.13	29.8	70.25	28.8	62.38	27.8
	0.15	91.58	31.4	82.50	30.3	74.54	29.3	67.36	28.4	61.40	27.7	55.27	26.9
18	0.00	215.23	44.9	179.66	40.5	151.49	36.9	128.97	34.1	111.07	31.9	94.46	29.8
	0.05	155.70	37.5	134.04	34.8	116.54	32.6	101.72	30.7	89.64	29.2	77.94	27.7
	0.10	120.65	33.1	106.58	31.3	94.72	29.8	84.43	28.6	75.91	27.5	67.40	26.4
	0.15	98.95	30.4	89.14	29.1	80.55	28.1	72.78	27.1	66.35	26.3	59.72	25.5
15	0.00	239.27	44.9	199.74	40.0	168.41	36.1	143.38	32.9	123.48	30.4	105.02	28.1
	0.05	173.10	36.6	149.02	33.6	129.56	31.2	113.08	29.1	99.66	27.5	86.65	25.8
	0.10	134.13	31.8	118.49	29.8	105.30	28.2	93.86	26.7	84.39	25.5	74.93	24.4
	0.15	110.01	28.8	99.10	27.4	89.54	26.2	80.91	25.1	73.76	24.2	66.40	23.3

Tab 36. Wall Heating Performance - plaster 2 cm - Diameter 12x2.0; $t_{fm} = 50^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	207.21	49.9	172.97	45.6	145.84	42.2	124.17	39.5	106.93	37.4	90.95	35.4
	0.05	149.90	42.7	129.05	40.1	112.19	38.0	97.93	36.2	86.30	34.8	75.04	33.4
	0.10	116.16	38.5	102.61	36.8	91.19	35.4	81.28	34.2	73.08	33.1	64.89	32.1
	0.15	95.27	35.9	85.82	34.7	77.55	33.7	70.07	32.8	63.88	32.0	57.50	31.2
22	0.00	223.24	49.9	186.36	45.3	157.13	41.6	133.78	38.7	115.20	36.4	97.98	34.2
	0.05	161.50	42.2	139.04	39.4	120.88	37.1	105.51	35.2	92.98	33.6	80.84	32.1
	0.10	125.15	37.6	110.55	35.8	98.25	34.3	87.57	32.9	78.74	31.8	69.91	30.7
	0.15	102.64	34.8	92.46	33.6	83.55	32.4	75.49	31.4	68.82	30.6	61.95	29.7
20	0.00	239.27	49.9	199.74	45.0	168.41	41.1	143.38	37.9	123.48	35.4	105.02	33.1
	0.05	173.10	41.6	149.02	38.6	129.56	36.2	113.08	34.1	99.66	32.5	86.65	30.8
	0.10	134.13	36.8	118.49	34.8	105.30	33.2	93.86	31.7	84.39	30.5	74.93	29.4
	0.15	110.01	33.8	99.10	32.4	89.54	31.2	80.91	30.1	73.76	29.2	66.40	28.3
18	0.00	255.30	49.9	213.11	44.6	179.69	40.5	152.98	37.1	131.74	34.5	112.05	32.0
	0.05	184.69	41.1	159.00	37.9	138.23	35.3	120.65	33.1	106.33	31.3	92.45	29.6
	0.10	143.11	35.9	126.43	33.8	112.35	32.0	100.14	30.5	90.04	29.3	79.95	28.0
	0.15	117.37	32.7	105.74	31.2	95.54	29.9	86.33	28.8	78.70	27.8	70.84	26.9
15	0.00	279.32	49.9	233.17	44.1	196.60	39.6	167.38	35.9	144.14	33.0	122.60	30.3
	0.05	202.07	40.3	173.96	36.7	151.24	33.9	132.01	31.5	116.34	29.5	101.15	27.6
	0.10	156.58	34.6	138.32	32.3	122.93	30.4	109.57	28.7	98.52	27.3	87.47	25.9
	0.15	128.42	31.1	115.69	29.5	104.53	28.1	94.46	26.8	86.11	25.8	77.51	24.7

Tab 37. Wall Heating Performance - plaster 2 cm - Diameter 14x2.0; $t_{fm} = 35^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	86.96	34.9	73.16	33.1	62.02	31.8	52.95	30.6	45.67	29.7	38.91	28.9
	0.05	62.91	31.9	54.48	30.8	47.57	29.9	41.64	29.2	36.75	28.6	32.05	28.0
	0.10	48.73	30.1	43.26	29.4	38.57	28.8	34.48	28.3	31.05	27.9	27.65	27.5
	0.15	39.94	29.0	36.11	28.5	32.72	28.1	29.65	27.7	27.07	27.4	24.44	27.1
22	0.00	103.30	34.9	86.91	32.9	73.67	31.2	62.90	29.9	54.24	28.8	46.22	27.8
	0.05	74.73	31.3	64.71	30.1	56.51	29.1	49.46	28.2	43.66	27.5	38.07	26.8
	0.10	57.88	29.2	51.38	28.4	45.82	27.7	40.96	27.1	36.88	26.6	32.84	26.1
	0.15	47.44	27.9	42.89	27.4	38.87	26.9	35.22	26.4	32.16	26.0	29.03	25.6
20	0.00	119.57	34.9	100.59	32.6	85.27	30.7	72.81	29.1	62.79	27.8	53.50	26.7
	0.05	86.50	30.8	74.91	29.4	65.41	28.2	57.26	27.2	50.53	26.3	44.06	25.5
	0.10	66.99	28.4	59.47	27.4	53.03	26.6	47.41	25.9	42.69	25.3	38.01	24.8
	0.15	54.92	26.9	49.64	26.2	44.99	25.6	40.77	25.1	37.22	24.7	33.60	24.2
18	0.00	135.79	35.0	114.25	32.3	96.84	30.1	82.69	28.3	71.31	26.9	60.77	25.6
	0.05	98.24	30.3	85.07	28.6	74.28	27.3	65.03	26.1	57.39	25.2	50.04	24.3
	0.10	76.08	27.5	67.54	26.4	60.23	25.5	53.84	24.7	48.48	24.1	43.17	23.4
	0.15	62.37	25.8	56.38	25.0	51.09	24.4	46.30	23.8	42.27	23.3	38.16	22.8
15	0.00	160.08	35.0	134.68	31.8	114.16	29.3	97.48	27.2	84.06	25.5	71.63	24.0
	0.05	115.81	29.5	100.29	27.5	87.57	25.9	76.66	24.6	67.65	23.5	58.99	22.4
	0.10	89.69	26.2	79.62	25.0	71.00	23.9	63.47	22.9	57.15	22.1	50.89	21.4
	0.15	73.52	24.2	66.46	23.3	60.23	22.5	54.59	21.8	49.83	21.2	44.99	20.6

Tab 38. Wall Heating Performance - plaster 2 cm - Diameter 14x2.0; $t_{fm} = 40^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	127.68	40.0	107.42	37.4	91.06	35.4	77.75	33.7	67.05	32.4	57.14	31.1
	0.05	92.37	35.5	79.99	34.0	69.85	32.7	61.14	31.6	53.96	30.7	47.05	29.9
	0.10	71.54	32.9	63.51	31.9	56.63	31.1	50.63	30.3	45.59	29.7	40.59	29.1
	0.15	58.64	31.3	53.01	30.6	48.04	30.0	43.54	29.4	39.75	29.0	35.88	28.5
22	0.00	143.89	40.0	121.06	37.1	102.62	34.8	87.62	33.0	75.56	31.4	64.39	30.0
	0.05	104.10	35.0	90.15	33.3	78.72	31.8	68.90	30.6	60.81	29.6	53.03	28.6
	0.10	80.62	32.1	71.57	30.9	63.82	30.0	57.05	29.1	51.37	28.4	45.75	27.7
	0.15	66.09	30.3	59.74	29.5	54.14	28.8	49.07	28.1	44.79	27.6	40.44	27.1
20	0.00	160.08	40.0	134.68	36.8	114.16	34.3	97.48	32.2	84.06	30.5	71.63	29.0
	0.05	115.81	34.5	100.29	32.5	87.57	30.9	76.66	29.6	67.65	28.5	58.99	27.4
	0.10	89.69	31.2	79.62	30.0	71.00	28.9	63.47	27.9	57.15	27.1	50.89	26.4
	0.15	73.52	29.2	66.46	28.3	60.23	27.5	54.59	26.8	49.83	26.2	44.99	25.6
18	0.00	176.25	40.0	148.28	36.5	125.69	33.7	107.32	31.4	92.55	29.6	78.87	27.9
	0.05	127.51	33.9	110.42	31.8	96.42	30.1	84.40	28.5	74.49	27.3	64.95	26.1
	0.10	98.75	30.3	87.67	29.0	78.18	27.8	69.88	26.7	62.93	25.9	56.03	25.0
	0.15	80.95	28.1	73.18	27.1	66.32	26.3	60.10	25.5	54.87	24.9	49.53	24.2
15	0.00	200.48	40.1	168.67	36.1	142.97	32.9	122.08	30.3	105.28	28.2	89.71	26.2
	0.05	145.04	33.1	125.60	30.7	109.67	28.7	96.00	27.0	84.73	25.6	73.88	24.2
	0.10	112.33	29.0	99.72	27.5	88.92	26.1	79.49	24.9	71.58	23.9	63.74	23.0
	0.15	92.08	26.5	83.24	25.4	75.43	24.4	68.36	23.5	62.41	22.8	56.34	22.0

Tab 39. Wall Heating Performance - plaster 2 cm - Diameter 14x2.0; $t_{fm} = 45^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	168.17	45.0	141.48	41.7	119.93	39.0	102.40	36.8	88.31	35.0	75.25	33.4
	0.05	121.66	39.2	105.35	37.2	91.99	35.5	80.53	34.1	71.07	32.9	61.97	31.7
	0.10	94.22	35.8	83.65	34.5	74.59	33.3	66.68	32.3	60.04	31.5	53.46	30.7
	0.15	77.24	33.7	69.82	32.7	63.28	31.9	57.34	31.2	52.35	30.5	47.26	29.9
22	0.00	184.33	45.0	155.08	41.4	131.46	38.4	112.24	36.0	96.80	34.1	82.48	32.3
	0.05	133.35	38.7	115.48	36.4	100.83	34.6	88.27	33.0	77.90	31.7	67.93	30.5
	0.10	103.28	34.9	91.69	33.5	81.76	32.2	73.09	31.1	65.81	30.2	58.60	29.3
	0.15	84.66	32.6	76.53	31.6	69.36	30.7	62.85	29.9	57.38	29.2	51.80	28.5
20	0.00	200.48	45.1	168.67	41.1	142.97	37.9	122.08	35.3	105.28	33.2	89.71	31.2
	0.05	145.04	38.1	125.60	35.7	109.67	33.7	96.00	32.0	84.73	30.6	73.88	29.2
	0.10	112.33	34.0	99.72	32.5	88.92	31.1	79.49	29.9	71.58	28.9	63.74	28.0
	0.15	92.08	31.5	83.24	30.4	75.43	29.4	68.36	28.5	62.41	27.8	56.34	27.0
18	0.00	216.62	45.1	182.25	40.8	154.49	37.3	131.90	34.5	113.76	32.2	96.94	30.1
	0.05	156.71	37.6	135.71	35.0	118.50	32.8	103.73	31.0	91.55	29.4	79.83	28.0
	0.10	121.37	33.2	107.75	31.5	96.08	30.0	85.89	28.7	77.34	27.7	68.87	26.6
	0.15	99.49	30.4	89.94	29.2	81.51	28.2	73.87	27.2	67.43	26.4	60.88	25.6
15	0.00	240.82	45.1	202.61	40.3	171.74	36.5	146.64	33.3	126.46	30.8	107.77	28.5
	0.05	174.22	36.8	150.87	33.9	131.74	31.5	115.32	29.4	101.78	27.7	88.75	26.1
	0.10	134.93	31.9	119.79	30.0	106.82	28.4	95.49	26.9	85.98	25.7	76.56	24.6
	0.15	110.61	28.8	99.99	27.5	90.61	26.3	82.12	25.3	74.97	24.4	67.68	23.5

Tab 40. Wall Heating Performance - plaster 2 cm - Diameter 14x2.0; $t_{fm} = 50^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	208.55	50.1	175.46	45.9	148.73	42.6	126.99	39.9	109.52	37.7	93.32	35.7
	0.05	150.88	42.9	130.65	40.3	114.09	38.3	99.87	36.5	88.14	35.0	76.85	33.6
	0.10	116.85	38.6	103.73	37.0	92.50	35.6	82.69	34.3	74.46	33.3	66.30	32.3
	0.15	95.79	36.0	86.59	34.8	78.47	33.8	71.11	32.9	64.92	32.1	58.61	31.3
22	0.00	224.69	50.1	189.04	45.6	160.24	42.0	136.82	39.1	117.99	36.7	100.55	34.6
	0.05	162.55	42.3	140.76	39.6	122.91	37.4	107.60	35.4	94.96	33.9	82.80	32.4
	0.10	125.90	37.7	111.76	36.0	99.66	34.5	89.09	33.1	80.22	32.0	71.43	30.9
	0.15	103.20	34.9	93.29	33.7	84.54	32.6	76.62	31.6	69.95	30.7	63.14	29.9
20	0.00	240.82	50.1	202.61	45.3	171.74	41.5	146.64	38.3	126.46	35.8	107.77	33.5
	0.05	174.22	41.8	150.87	38.9	131.74	36.5	115.32	34.4	101.78	32.7	88.75	31.1
	0.10	134.93	36.9	119.79	35.0	106.82	33.4	95.49	31.9	85.98	30.7	76.56	29.6
	0.15	110.61	33.8	99.99	32.5	90.61	31.3	82.12	30.3	74.97	29.4	67.68	28.5
18	0.00	256.95	50.1	216.18	45.0	183.25	40.9	156.46	37.6	134.93	34.9	114.98	32.4
	0.05	185.89	41.2	160.97	38.1	140.56	35.6	123.04	33.4	108.59	31.6	94.69	29.8
	0.10	143.97	36.0	127.81	34.0	113.97	32.2	101.88	30.7	91.74	29.5	81.69	28.2
	0.15	118.02	32.8	106.69	31.3	96.68	30.1	87.62	29.0	79.99	28.0	72.21	27.0
15	0.00	281.13	50.1	236.53	44.6	200.49	40.1	171.19	36.4	147.63	33.5	125.80	30.7
	0.05	203.38	40.4	176.12	37.0	153.79	34.2	134.62	31.8	118.81	29.9	103.60	28.0
	0.10	157.52	34.7	139.84	32.5	124.70	30.6	111.47	28.9	100.37	27.5	89.38	26.2
	0.15	129.12	31.1	116.73	29.6	105.78	28.2	95.86	27.0	87.52	25.9	79.01	24.9

Tab 41. Wall Heating Performance - plaster 2 cm - Diameter 16x2.0; $t_{fm} = 35^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	87.52	34.9	74.22	33.3	63.25	31.9	54.16	30.8	46.77	29.8	39.93	29.0
	0.05	63.32	31.9	55.16	30.9	48.37	30.0	42.47	29.3	37.53	28.7	32.82	28.1
	0.10	49.02	30.1	43.73	29.5	39.13	28.9	35.08	28.4	31.63	28.0	28.25	27.5
	0.15	40.16	29.0	36.43	28.6	33.11	28.1	30.09	27.8	27.51	27.4	24.91	27.1
22	0.00	103.97	35.0	88.16	33.0	75.13	31.4	64.33	30.0	55.56	28.9	47.43	27.9
	0.05	75.21	31.4	65.52	30.2	57.46	29.2	50.44	28.3	44.58	27.6	38.99	26.9
	0.10	58.22	29.3	51.94	28.5	46.48	27.8	41.67	27.2	37.57	26.7	33.55	26.2
	0.15	47.70	28.0	43.27	27.4	39.33	26.9	35.75	26.5	32.68	26.1	29.59	25.7
20	0.00	120.34	35.0	102.04	32.8	86.96	30.9	74.46	29.3	64.31	28.0	54.90	26.9
	0.05	87.06	30.9	75.84	29.5	66.51	28.3	58.39	27.3	51.61	26.5	45.13	25.6
	0.10	67.39	28.4	60.12	27.5	53.80	26.7	48.23	26.0	43.49	25.4	38.84	24.9
	0.15	55.22	26.9	50.09	26.3	45.52	25.7	41.38	25.2	37.83	24.7	34.25	24.3
18	0.00	136.67	35.1	115.89	32.5	98.76	30.3	84.57	28.6	73.04	27.1	62.35	25.8
	0.05	98.87	30.4	86.13	28.8	75.54	27.4	66.31	26.3	58.61	25.3	51.25	24.4
	0.10	76.54	27.6	68.28	26.5	61.10	25.6	54.78	24.8	49.39	24.2	44.11	23.5
	0.15	62.71	25.8	56.89	25.1	51.70	24.5	46.99	23.9	42.96	23.4	38.90	22.9
15	0.00	161.12	35.1	136.62	32.1	116.42	29.6	99.69	27.5	86.10	25.8	73.51	24.2
	0.05	116.56	29.6	101.53	27.7	89.05	26.1	78.17	24.8	69.09	23.6	60.42	22.6
	0.10	90.23	26.3	80.50	25.1	72.03	24.0	64.57	23.1	58.23	22.3	52.00	21.5
	0.15	73.93	24.2	67.06	23.4	60.95	22.6	55.40	21.9	50.65	21.3	45.86	20.7

Tab 42. Wall Heating Performance - plaster 2 cm - Diameter 16x2.0; $t_{fm} = 40^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	128.51	40.1	108.97	37.6	92.86	35.6	79.52	33.9	68.67	32.6	58.63	31.3
	0.05	92.97	35.6	80.98	34.1	71.02	32.9	62.35	31.8	55.11	30.9	48.19	30.0
	0.10	71.97	33.0	64.20	32.0	57.45	31.2	51.50	30.4	46.44	29.8	41.48	29.2
	0.15	58.97	31.4	53.49	30.7	48.62	30.1	44.19	29.5	40.40	29.0	36.58	28.6
22	0.00	144.83	40.1	122.80	37.4	104.65	35.1	89.61	33.2	77.39	31.7	66.07	30.3
	0.05	104.77	35.1	91.27	33.4	80.04	32.0	70.27	30.8	62.11	29.8	54.31	28.8
	0.10	81.11	32.1	72.36	31.0	64.74	30.1	58.04	29.3	52.34	28.5	46.74	27.8
	0.15	66.45	30.3	60.28	29.5	54.79	28.8	49.80	28.2	45.53	27.7	41.22	27.2
20	0.00	161.12	40.1	136.62	37.1	116.42	34.6	99.69	32.5	86.10	30.8	73.51	29.2
	0.05	116.56	34.6	101.53	32.7	89.05	31.1	78.17	29.8	69.09	28.6	60.42	27.6
	0.10	90.23	31.3	80.50	30.1	72.03	29.0	64.57	28.1	58.23	27.3	52.00	26.5
	0.15	73.93	29.2	67.06	28.4	60.95	27.6	55.40	26.9	50.65	26.3	45.86	25.7
18	0.00	177.39	40.2	150.42	36.8	128.18	34.0	109.76	31.7	94.80	29.8	80.93	28.1
	0.05	128.33	34.0	111.79	32.0	98.04	30.3	86.07	28.8	76.07	27.5	66.52	26.3
	0.10	99.34	30.4	88.63	29.1	79.30	27.9	71.09	26.9	64.11	26.0	57.25	25.2
	0.15	81.40	28.2	73.83	27.2	67.11	26.4	60.99	25.6	55.76	25.0	50.49	24.3
15	0.00	201.78	40.2	171.10	36.4	145.80	33.2	124.85	30.6	107.83	28.5	92.06	26.5
	0.05	145.98	33.2	127.16	30.9	111.52	28.9	97.90	27.2	86.53	25.8	75.67	24.5
	0.10	113.00	29.1	100.81	27.6	90.20	26.3	80.87	25.1	72.92	24.1	65.12	23.1
	0.15	92.59	26.6	83.98	25.5	76.33	24.5	69.38	23.7	63.43	22.9	57.43	22.2

Tab 43. Wall Heating Performance - plaster 2 cm - Diameter 16x2.0; $t_{fm} = 45^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	169.26	45.2	143.52	41.9	122.30	39.3	104.73	37.1	90.45	35.3	77.22	33.7
	0.05	122.45	39.3	106.66	37.3	93.54	35.7	82.12	34.3	72.58	33.1	63.47	31.9
	0.10	94.79	35.8	84.56	34.6	75.66	33.5	67.83	32.5	61.17	31.6	54.63	30.8
	0.15	77.66	33.7	70.45	32.8	64.03	32.0	58.20	31.3	53.21	30.7	48.17	30.0
22	0.00	185.52	45.2	157.31	41.7	134.06	38.8	114.79	36.3	99.14	34.4	84.64	32.6
	0.05	134.22	38.8	116.91	36.6	102.53	34.8	90.02	33.3	79.56	31.9	69.57	30.7
	0.10	103.90	35.0	92.69	33.6	82.94	32.4	74.35	31.3	67.05	30.4	59.88	29.5
	0.15	85.13	32.6	77.22	31.7	70.18	30.8	63.79	30.0	58.32	29.3	52.80	28.6
20	0.00	201.78	45.2	171.10	41.4	145.80	38.2	124.85	35.6	107.83	33.5	92.06	31.5
	0.05	145.98	38.2	127.16	35.9	111.52	33.9	97.90	32.2	86.53	30.8	75.67	29.5
	0.10	113.00	34.1	100.81	32.6	90.20	31.3	80.87	30.1	72.92	29.1	65.12	28.1
	0.15	92.59	31.6	83.98	30.5	76.33	29.5	69.38	28.7	63.43	27.9	57.43	27.2
18	0.00	218.03	45.3	184.87	41.1	157.54	37.7	134.90	34.9	116.51	32.6	99.47	30.4
	0.05	157.73	37.7	137.39	35.2	120.50	33.1	105.79	31.2	93.50	29.7	81.76	28.2
	0.10	122.10	33.3	108.93	31.6	97.47	30.2	87.38	28.9	78.79	27.8	70.37	26.8
	0.15	100.04	30.5	90.75	29.3	82.48	28.3	74.97	27.4	68.54	26.6	62.05	25.8
15	0.00	242.38	45.3	205.53	40.7	175.15	36.9	149.98	33.7	129.53	31.2	110.58	28.8
	0.05	175.35	36.9	152.74	34.1	133.96	31.7	117.60	29.7	103.94	28.0	90.90	26.4
	0.10	135.74	32.0	121.10	30.1	108.35	28.5	97.14	27.1	87.60	25.9	78.23	24.8
	0.15	111.22	28.9	100.88	27.6	91.69	26.5	83.34	25.4	76.19	24.5	68.98	23.6

Tab 44. Wall Heating Performance - plaster 2 cm - Diameter 16x2.0; $t_{fm} = 50^{\circ}\text{C}$ - Profil, Tacker, Rail

T	[m]	0.05		0.10		0.15		0.20		0.25		0.30	
t_i	R_{λ_B}	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s	q	t_s
[°C]	[m ² K/W]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]	[W/m ²]	[°C]
24	0.00	209.90	50.2	177.99	46.2	151.68	43.0	129.88	40.2	112.17	38.0	95.77	36.0
	0.05	151.85	43.0	132.28	40.5	116.01	38.5	101.84	36.7	90.01	35.3	78.72	33.8
	0.10	117.55	38.7	104.87	37.1	93.83	35.7	84.12	34.5	75.86	33.5	67.75	32.5
	0.15	96.31	36.0	87.37	34.9	79.41	33.9	72.17	33.0	65.98	32.2	59.74	31.5
22	0.00	226.15	50.3	191.76	46.0	163.41	42.4	139.93	39.5	120.85	37.1	103.18	34.9
	0.05	163.60	42.5	142.51	39.8	124.99	37.6	109.73	35.7	96.98	34.1	84.81	32.6
	0.10	126.65	37.8	112.98	36.1	101.10	34.6	90.63	33.3	81.73	32.2	72.99	31.1
	0.15	103.77	35.0	94.13	33.8	85.55	32.7	77.76	31.7	71.09	30.9	64.36	30.0
20	0.00	242.38	50.3	205.53	45.7	175.15	41.9	149.98	38.7	129.53	36.2	110.58	33.8
	0.05	175.35	41.9	152.74	39.1	133.96	36.7	117.60	34.7	103.94	33.0	90.90	31.4
	0.10	135.74	37.0	121.10	35.1	108.35	33.5	97.14	32.1	87.60	30.9	78.23	29.8
	0.15	111.22	33.9	100.88	32.6	91.69	31.5	83.34	30.4	76.19	29.5	68.98	28.6
18	0.00	258.61	50.3	219.29	45.4	186.87	41.4	160.02	38.0	138.20	35.3	117.99	32.7
	0.05	187.09	41.4	162.97	38.4	142.93	35.9	125.48	33.7	110.90	31.9	96.98	30.1
	0.10	144.83	36.1	129.21	34.2	115.61	32.5	103.65	31.0	93.46	29.7	83.47	28.4
	0.15	118.66	32.8	107.64	31.5	97.83	30.2	88.92	29.1	81.30	28.2	73.60	27.2
15	0.00	282.95	50.4	239.93	45.0	204.46	40.6	175.08	36.9	151.21	33.9	129.09	31.1
	0.05	204.70	40.6	178.31	37.3	156.38	34.5	137.29	32.2	121.34	30.2	106.11	28.3
	0.10	158.46	34.8	141.37	32.7	126.49	30.8	113.40	29.2	102.26	27.8	91.32	26.4
	0.15	129.83	31.2	117.77	29.7	107.04	28.4	97.29	27.2	88.95	26.1	80.53	25.1

Tab 45. Floor Heating Performance - dry screed thickness 2.5 cm - Diameter 16×2.0; $t_{fm} = 35^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	61.87	29.7	45.56	28.2	32.28	27.0
	0.05	46.26	28.3	36.24	27.4	27.19	26.5
	0.10	36.94	27.4	30.09	26.8	23.48	26.2
	0.15	30.74	26.8	25.72	26.4	20.67	25.9
22	0.00	73.49	28.8	54.12	27.0	38.34	25.5
	0.05	54.95	27.1	43.05	26.0	32.29	25.0
	0.10	43.87	26.1	35.74	25.3	27.89	24.6
	0.15	36.52	25.4	30.55	24.8	24.55	24.3
20	0.00	85.07	27.9	62.65	25.8	44.38	24.1
	0.05	63.60	25.9	49.83	24.6	37.38	23.5
	0.10	50.78	24.7	41.37	23.8	32.29	23.0
	0.15	42.27	23.9	35.36	23.3	28.42	22.6
18	0.00	96.61	26.9	71.15	24.6	50.40	22.7
	0.05	72.23	24.7	56.60	23.2	42.45	21.9
	0.10	57.68	23.3	46.98	22.4	36.67	21.4
	0.15	48.00	22.4	40.16	21.7	32.27	21.0
15	0.00	113.89	25.5	83.88	22.8	59.41	20.5
	0.05	85.15	22.9	66.72	21.2	50.04	19.6
	0.10	67.99	21.3	55.39	20.1	43.23	19.0
	0.15	56.59	20.2	47.35	19.4	38.05	18.5

Tab 46. Floor Heating Performance - dry screed thickness 2.5 cm - Diameter 16×2.0; $t_{fm} = 40^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	90.84	32.4	66.90	30.2	47.39	28.4
	0.05	67.92	30.3	53.22	28.9	39.92	27.7
	0.10	54.23	29.0	44.18	28.1	34.48	27.2
	0.15	45.14	28.2	37.77	27.5	30.35	26.8
22	0.00	102.38	31.5	75.39	29.0	53.41	26.9
	0.05	76.54	29.1	59.97	27.6	44.98	26.2
	0.10	61.12	27.7	49.79	26.6	38.86	25.6
	0.15	50.87	26.7	42.56	25.9	34.20	25.2
20	0.00	113.89	30.5	83.88	27.8	59.41	25.5
	0.05	85.15	27.9	66.72	26.2	50.04	24.6
	0.10	67.99	26.3	55.39	25.1	43.23	24.0
	0.15	56.59	25.2	47.35	24.4	38.05	23.5
18	0.00	125.40	29.6	92.35	26.6	65.42	24.1
	0.05	93.75	26.7	73.46	24.8	55.10	23.1
	0.10	74.86	24.9	60.98	23.6	47.59	22.4
	0.15	62.31	23.8	52.13	22.8	41.89	21.9
15	0.00	142.64	28.2	105.04	24.7	74.41	21.9
	0.05	106.64	24.9	83.56	22.7	62.67	20.8
	0.10	85.15	22.9	69.37	21.4	54.14	20.0
	0.15	70.87	21.6	59.30	20.5	47.65	19.4

Tab 47. Floor Heating Performance - dry screed thickness 2.5 cm - Diameter 16×2.0; $t_{fm} = 45^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	119.65	35.1	88.11	32.2	62.42	29.8
	0.05	89.45	32.3	70.09	30.5	52.57	28.9
	0.10	71.43	30.6	58.19	29.4	45.41	28.2
	0.15	59.45	29.5	49.74	28.6	39.97	27.7
22	0.00	131.15	34.1	96.58	30.9	68.41	28.3
	0.05	98.05	31.1	76.82	29.1	57.63	27.3
	0.10	78.29	29.2	63.78	27.9	49.78	26.6
	0.15	65.16	28.0	54.52	27.0	43.81	26.1
20	0.00	142.64	33.2	105.04	29.7	74.41	26.9
	0.05	106.64	29.9	83.56	27.7	62.67	25.8
	0.10	85.15	27.9	69.37	26.4	54.14	25.0
	0.15	70.87	26.6	59.30	25.5	47.65	24.4
18	0.00	154.12	32.3	113.50	28.5	80.40	25.4
	0.05	115.23	28.7	90.28	26.4	67.72	24.3
	0.10	92.01	26.5	74.95	24.9	58.50	23.4
	0.15	76.58	25.1	64.07	23.9	51.48	22.8
15	0.00	171.34	30.9	126.18	26.7	89.38	23.3
	0.05	128.10	26.9	100.37	24.3	75.29	22.0
	0.10	102.29	24.5	83.32	22.7	65.03	21.0
	0.15	85.13	22.9	71.23	21.6	57.23	20.3

Tab 48. Floor Heating Performance - dry screed thickness 2.5 cm - Diameter 16×2.0; $t_{fm} = 50^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	148.38	37.7	109.27	34.1	77.41	31.2
	0.05	110.94	34.3	86.92	32.0	65.20	30.0
	0.10	88.58	32.2	72.16	30.7	56.32	29.2
	0.15	73.72	30.8	61.68	29.7	49.57	28.6
22	0.00	159.86	36.8	117.73	32.9	83.40	29.7
	0.05	119.52	33.1	93.65	30.7	70.24	28.5
	0.10	95.44	30.8	77.74	29.2	60.67	27.6
	0.15	79.43	29.4	66.46	28.2	53.40	26.9
20	0.00	171.34	35.9	126.18	31.7	89.38	28.3
	0.05	128.10	31.9	100.37	29.3	75.29	27.0
	0.10	102.29	29.5	83.32	27.7	65.03	26.0
	0.15	85.13	27.9	71.23	26.6	57.23	25.3
18	0.00	182.82	34.9	134.63	30.5	95.37	26.8
	0.05	136.68	30.7	107.09	27.9	80.33	25.4
	0.10	109.14	28.1	88.90	26.2	69.39	24.4
	0.15	90.83	26.4	76.00	25.0	61.07	23.7
15	0.00	200.02	33.5	147.30	28.6	104.34	24.7
	0.05	149.54	28.8	117.17	25.8	87.89	23.1
	0.10	119.41	26.1	97.27	24.0	75.92	22.0
	0.15	99.38	24.2	83.15	22.7	66.82	21.2

Tab 49. Floor Heating Performance - dry screed thickness 4.3 cm - Diameter 16×2.0; $t_{fm} = 35^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	56.50	29.2	43.08	28.0	28.51	26.6
	0.05	43.19	28.0	34.65	27.2	24.46	26.3
	0.10	34.95	27.2	28.98	26.7	21.42	26.0
	0.15	29.35	26.7	24.91	26.3	19.05	25.8
22	0.00	67.11	28.2	51.17	26.7	33.86	25.1
	0.05	51.30	26.7	41.16	25.8	29.06	24.7
	0.10	41.52	25.8	34.43	25.2	25.45	24.4
	0.15	34.87	25.2	29.59	24.7	22.63	24.1
20	0.00	77.68	27.2	59.23	25.5	39.19	23.6
	0.05	59.38	25.5	47.65	24.4	33.63	23.1
	0.10	48.06	24.4	39.85	23.7	29.45	22.7
	0.15	40.36	23.7	34.25	23.2	26.20	22.4
18	0.00	88.22	26.2	67.27	24.2	44.51	22.1
	0.05	67.44	24.2	54.11	23.0	38.20	21.5
	0.10	54.58	23.1	45.26	22.2	33.45	21.1
	0.15	45.84	22.2	38.90	21.6	29.75	20.8
15	0.00	104.01	24.6	79.30	22.3	52.48	19.9
	0.05	79.50	22.4	63.79	20.9	45.03	19.2
	0.10	64.34	21.0	53.36	19.9	39.43	18.7
	0.15	54.04	20.0	45.85	19.2	35.07	18.2

Tab 50. Floor Heating Performance - dry screed thickness 4.3 cm - Diameter 16×2.0; $t_{fm} = 40^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	82.96	31.7	63.25	29.9	41.86	27.9
	0.05	63.41	29.9	50.88	28.7	35.92	27.3
	0.10	51.32	28.8	42.56	27.9	31.45	26.9
	0.15	43.10	28.0	36.57	27.4	27.98	26.6
22	0.00	93.49	30.7	71.28	28.6	47.17	26.4
	0.05	71.46	28.6	57.34	27.3	40.48	25.7
	0.10	57.83	27.4	47.96	26.4	35.45	25.3
	0.15	48.57	26.5	41.22	25.8	31.53	24.9
20	0.00	104.01	29.6	79.30	27.3	52.48	24.9
	0.05	79.50	27.4	63.79	25.9	45.03	24.2
	0.10	64.34	26.0	53.36	24.9	39.43	23.7
	0.15	54.04	25.0	45.85	24.2	35.07	23.2
18	0.00	114.51	28.6	87.31	26.1	57.78	23.3
	0.05	87.53	26.1	70.23	24.5	49.58	22.6
	0.10	70.84	24.6	58.74	23.4	43.42	22.0
	0.15	59.49	23.5	50.49	22.7	38.62	21.6
15	0.00	130.25	27.1	99.31	24.2	65.72	21.1
	0.05	99.56	24.2	79.89	22.4	56.39	20.2
	0.10	80.58	22.5	66.82	21.2	49.39	19.6
	0.15	67.67	21.3	57.43	20.3	43.93	19.1

Tab 51. Floor Heating Performance - dry screed thickness 4.3 cm - Diameter 16×2.0; $t_{fm} = 45^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	109.26	34.1	83.31	31.7	55.13	29.1
	0.05	83.52	31.7	67.01	30.2	47.30	28.4
	0.10	67.59	30.3	56.05	29.2	41.43	27.8
	0.15	56.77	29.3	48.17	28.5	36.85	27.4
22	0.00	119.76	33.1	91.31	30.5	60.42	27.6
	0.05	91.54	30.5	73.45	28.8	51.85	26.8
	0.10	74.09	28.9	61.44	27.7	45.41	26.2
	0.15	62.22	27.8	52.80	26.9	40.39	25.7
20	0.00	130.25	32.1	99.31	29.2	65.72	26.1
	0.05	99.56	29.2	79.89	27.4	56.39	25.2
	0.10	80.58	27.5	66.82	26.2	49.39	24.6
	0.15	67.67	26.3	57.43	25.3	43.93	24.1
18	0.00	140.74	31.0	107.31	27.9	71.01	24.6
	0.05	107.58	28.0	86.32	26.0	60.93	23.6
	0.10	87.07	26.1	72.20	24.7	53.36	22.9
	0.15	73.12	24.8	62.05	23.7	47.46	22.4
15	0.00	156.46	29.5	119.30	26.0	78.94	22.3
	0.05	119.60	26.1	95.97	23.9	67.74	21.3
	0.10	96.79	24.0	80.27	22.4	59.32	20.5
	0.15	81.29	22.5	68.98	21.4	52.77	19.9

Tab 52. Floor Heating Performance - dry screed thickness 4.3 cm - Diameter 16×2.0; $t_{fm} = 50^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	135.50	36.5	103.31	33.6	68.36	30.3
	0.05	103.57	33.6	83.11	31.7	58.66	29.4
	0.10	83.82	31.8	69.51	30.4	51.37	28.8
	0.15	70.40	30.5	59.74	29.5	45.70	28.2
22	0.00	145.98	35.5	111.31	32.3	73.65	28.8
	0.05	111.59	32.3	89.54	30.3	63.20	27.9
	0.10	90.31	30.4	74.89	28.9	55.35	27.1
	0.15	75.85	29.0	64.36	28.0	49.23	26.6
20	0.00	156.46	34.5	119.30	31.0	78.94	27.3
	0.05	119.60	31.1	95.97	28.9	67.74	26.3
	0.10	96.79	29.0	80.27	27.4	59.32	25.5
	0.15	81.29	27.5	68.98	26.4	52.77	24.9
18	0.00	166.94	33.5	127.29	29.8	84.23	25.8
	0.05	127.61	29.8	102.39	27.5	72.28	24.7
	0.10	103.28	27.6	85.64	25.9	63.30	23.9
	0.15	86.74	26.0	73.60	24.8	56.30	23.2
15	0.00	182.65	31.9	139.27	27.9	92.16	23.5
	0.05	139.62	27.9	112.03	25.4	79.08	22.3
	0.10	113.00	25.5	93.70	23.7	69.25	21.4
	0.15	94.90	23.8	80.53	22.5	61.60	20.7

Tab 53. Floor Heating Performance - plaster thickness 1.8 cm - Diameter 16×2.0; $t_{fm} = 35^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	61.93	31.7	45.61	29.7	32.31	28.0
	0.05	46.29	29.8	36.27	28.5	27.21	27.4
	0.10	36.96	28.6	30.11	27.8	23.50	26.9
	0.15	30.76	27.8	25.74	27.2	20.68	26.6
22	0.00	73.57	31.2	54.18	28.8	38.38	26.8
	0.05	54.99	28.9	43.09	27.4	32.32	26.0
	0.10	43.90	27.5	35.76	26.5	27.91	25.5
	0.15	36.53	26.6	30.57	25.8	24.57	25.1
20	0.00	85.15	30.6	62.71	27.8	44.42	25.6
	0.05	63.65	28.0	49.87	26.2	37.41	24.7
	0.10	50.82	26.4	41.40	25.2	32.31	24.0
	0.15	42.29	25.3	35.38	24.4	28.43	23.6
18	0.00	96.71	30.1	71.22	26.9	50.45	24.3
	0.05	72.29	27.0	56.64	25.1	42.49	23.3
	0.10	57.71	25.2	47.02	23.9	36.70	22.6
	0.15	48.03	24.0	40.19	23.0	32.29	22.0
15	0.00	114.01	29.3	83.96	25.5	59.47	22.4
	0.05	85.22	25.7	66.77	23.3	50.09	21.3
	0.10	68.03	23.5	55.42	21.9	43.26	20.4
	0.15	56.62	22.1	47.37	20.9	38.07	19.8

Tab 54. Floor Heating Performance - plaster thickness 1.8 cm - Diameter 16×2.0; $t_{fm} = 40^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	90.94	35.4	66.97	32.4	47.44	29.9
	0.05	67.97	32.5	53.26	30.7	39.95	29.0
	0.10	54.26	30.8	44.21	29.5	34.50	28.3
	0.15	45.16	29.6	37.79	28.7	30.37	27.8
22	0.00	102.48	34.8	75.47	31.4	53.46	28.7
	0.05	76.60	31.6	60.02	29.5	45.02	27.6
	0.10	61.15	29.6	49.82	28.2	38.89	26.9
	0.15	50.89	28.4	42.58	27.3	34.22	26.3
20	0.00	114.01	34.3	83.96	30.5	59.47	27.4
	0.05	85.22	30.7	66.77	28.3	50.09	26.3
	0.10	68.03	28.5	55.42	26.9	43.26	25.4
	0.15	56.62	27.1	47.37	25.9	38.07	24.8
18	0.00	125.52	33.7	92.44	29.6	65.48	26.2
	0.05	93.82	29.7	73.52	27.2	55.15	24.9
	0.10	74.91	27.4	61.02	25.6	47.63	24.0
	0.15	62.34	25.8	52.16	24.5	41.92	23.2
15	0.00	142.78	32.8	105.15	28.1	74.48	24.3
	0.05	106.72	28.3	83.62	25.5	62.73	22.8
	0.10	85.20	25.7	69.41	23.7	54.18	21.8
	0.15	70.91	23.9	59.33	22.4	47.68	21.0

Tab 55. Floor Heating Performance - plaster thickness 1.8 cm - Diameter 16×2.0; $t_{fm} = 45^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	119.77	39.0	88.20	35.0	62.48	31.8
	0.05	89.52	35.2	70.14	32.8	52.62	30.6
	0.10	71.47	32.9	58.22	31.3	45.44	29.7
	0.15	59.48	31.4	49.77	30.2	39.99	29.0
22	0.00	131.28	38.4	96.68	34.1	68.48	30.6
	0.05	98.12	34.3	76.89	31.6	57.67	29.2
	0.10	78.34	31.8	63.82	30.0	49.81	28.2
	0.15	65.19	30.1	54.55	28.8	43.84	27.5
20	0.00	142.78	37.8	105.15	33.1	74.48	29.3
	0.05	106.72	33.3	83.62	30.5	62.73	27.8
	0.10	85.20	30.7	69.41	28.7	54.18	26.8
	0.15	70.91	28.9	59.33	27.4	47.68	26.0
18	0.00	154.28	37.3	113.62	32.2	80.48	28.1
	0.05	115.31	32.4	90.36	29.3	67.78	26.5
	0.10	92.06	29.5	75.00	27.4	58.54	25.3
	0.15	76.62	27.6	64.11	26.0	51.52	24.4
15	0.00	171.51	36.4	126.31	30.8	89.47	26.2
	0.05	128.20	31.0	100.45	27.6	75.35	24.4
	0.10	102.35	27.8	83.38	25.4	65.08	23.1
	0.15	85.18	25.6	71.27	23.9	57.27	22.2

Tab 56. Floor Heating Performance - plaster thickness 1.8 cm - Diameter 16×2.0; $t_{fm} = 50^{\circ}\text{C}$ - TBS

T	[m]	0.05		0.10		0.15	
t_i	$R\lambda_B$	q	t_s	q	t_s	q	t_s
[°C]	[m²K/W]	[W/m²]	[°C]	[W/m²]	[°C]	[W/m²]	[°C]
24	0.00	148.53	42.6	109.38	37.7	77.48	33.7
	0.05	111.02	37.9	86.99	34.9	65.25	32.2
	0.10	88.63	35.1	72.21	33.0	56.36	31.0
	0.15	73.76	33.2	61.72	31.7	49.60	30.2
22	0.00	160.02	42.0	117.85	36.7	83.48	32.4
	0.05	119.61	37.0	93.72	33.7	70.30	30.8
	0.10	95.49	33.9	77.79	31.7	60.72	29.6
	0.15	79.47	31.9	66.50	30.3	53.44	28.7
20	0.00	171.51	41.4	126.31	35.8	89.47	31.2
	0.05	128.20	36.0	100.45	32.6	75.35	29.4
	0.10	102.35	32.8	83.38	30.4	65.08	28.1
	0.15	85.18	30.6	71.27	28.9	57.27	27.2
18	0.00	183.00	40.9	134.77	34.8	95.47	29.9
	0.05	136.78	35.1	107.18	31.4	80.40	28.0
	0.10	109.20	31.7	88.96	29.1	69.44	26.7
	0.15	90.88	29.4	76.04	27.5	61.11	25.6
15	0.00	200.22	40.0	147.45	33.4	104.45	28.1
	0.05	149.66	33.7	117.26	29.7	87.96	26.0
	0.10	119.48	29.9	97.34	27.2	75.97	24.5
	0.15	99.43	27.4	83.20	25.4	66.86	23.4

Tab 57. Quick selection of floor heating circuit spacing based on heating medium temperature and desired thermal power

Unit thermal power q [W/m ²]		35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125				
Floor temperature at external temperature of 20°C		23.5	23.9	24.4	24.8	25.2	25.7	26.1	26.5	26.9	27.3	27.8	28.2	28.6	29.0	29.4	29.8	30.2	30.6	31.0				
Floor temperature at external temperature of 24°C		27.5	27.9	28.4	28.8	29.2	29.7	30.1	30.5	30.9	31.3	31.8	32.2	32.6	33.0	33.4	33.8	34.2	34.6	35.0				
Heating water temperature	Indoor space temperature	R ₁₈ [m ² K/W]																						
		Human occupied zone - spacing T [m]																						
Type of floor covering		Edge zone - spacing T [m]																						
35/25°C	20°C	Ceramic tiles	0.00	0.30	0.25	0.20	0.15	0.10																
		PVC floor lining	0.05	0.20	0.15	0.10																		
		Panels or carpets	0.10	0.10																				
		Parquet or thick carpet	0.15																					
40/30°C	24°C	Ceramic tiles	0.00	0.10																				
		Ceramic tiles	0.00	0.35	0.30	0.25	0.20	0.15	0.10															
		PVC floor lining	0.05	0.35	0.30	0.25	0.20	0.15	0.10															
		Panels or carpets	0.10	0.30	0.25	0.20	0.15	0.10																
45/35°C	20°C	Parquet or thick carpet	0.15	0.20	0.15	0.10																		
		Ceramic tiles	0.00	0.30	0.25	0.20	0.15	0.10																
		Ceramic tiles	0.00	0.35	0.35	0.30	0.25	0.20	0.15	0.10														
		PVC floor lining	0.05	0.35	0.35	0.30	0.25	0.20	0.15	0.10														
50/40°C	20°C	Panels or carpets	0.10	0.35	0.30	0.25	0.20	0.15	0.10															
		Parquet or thick carpet	0.15	0.35	0.30	0.25	0.20	0.15	0.10															
		Ceramic tiles	0.00	0.35	0.35	0.30	0.25	0.20	0.15	0.10														
		Ceramic tiles	0.00	0.35	0.35	0.30	0.25	0.20	0.15	0.10														
55/45°C	20°C	Panels or carpets	0.10	0.35	0.35	0.30	0.25	0.20	0.15	0.10														
		Parquet or thick carpet	0.15	0.35	0.35	0.30	0.25	0.20	0.15	0.10														
		Ceramic tiles	0.00	0.35	0.35	0.30	0.25	0.20	0.15	0.10														
		Ceramic tiles	0.00	0.35	0.35	0.30	0.25	0.20	0.15	0.10														
55/45°C	24°C	Ceramic tiles	0.00	0.35	0.35	0.30	0.25	0.20	0.15	0.10														
		PVC floor lining	0.05	0.35	0.35	0.30	0.25	0.20	0.15	0.10														
		Panels or carpets	0.10	0.35	0.35	0.30	0.25	0.20	0.15	0.10														
		Parquet or thick carpet	0.15	0.35	0.35	0.30	0.25	0.20	0.15	0.10														

Table for concrete slab layer 4.5 cm thick over the pipe. Table applicable to 14x2.0; 16x2.0 and 18x2.0 mm with degree of accuracy at 3%.

TECHNOLOGY OF SUCCESS



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