

ROZBUDOWA ZKŁADU PRZETWÓRSTWA OWOCÓW O HALĘ PRODUKCYJNĄ Z CZĘŚCIĄ SOCJALNĄ, HALĘ PRODUKCJI LIOFILIZATÓW,  
ORAZ 3 HALE NAMIOTOWE NA OPAKOWANIA I MAGAZYN OWOCÓW MROŻONYCH

ISTNIEJĄCY ZAKŁAD

PORA DNIA  
BEZ UWZGLĘDNIENIA TŁA AKUSTYCZNEGO

HAŁAS PRZEMYSŁOWY I DROGOWY  
PROGRAM SON2 WERSJA 3.2

#### DANE WEJŚCIOWE

Rodzaj obliczeń: Poziom hałasu równonoważnego

- Nazwa projektu:  
Rozbudowy zakładu przetwórstwa owoców o halę produkcyjną z częścią socjalną, halę produkcji liofilizatów,  
oraz 3 hale namiotowe na opakowania i magazyn owoców mrożonych
- Temperatura powietrza [st C.] = 10
- Wilgotność względna powietrza [%] = 70
- Tłó akustyczne dB(A):  
Pora dnia : 0  
Pora nocy : 0
- Rodzaj gruntu : grunt twardy. wskaźnik gruntu G = 0
- Punktowe źródła hałasu

Lp	Symbol	współrzędne źródła			Rodzaj źródła	LAW	tD
		x	y	z			
		m	m	m		dB(A)	h
1	1	113.9	281.4	1.0	wszechkier.	76.2	8.0
2	2	106.9	284.7	1.0	wszechkier.	76.2	8.0
3	3	106.2	294.7	1.0	wszechkier.	76.2	8.0
4	4	105.5	304.6	1.0	wszechkier.	76.2	8.0
5	5	96.2	314.6	1.0	wszechkier.	76.2	8.0
6	6	86.2	314.6	1.0	wszechkier.	76.2	8.0
7	7	104.7	316.0	1.0	wszechkier.	76.2	8.0
8	8	104.0	326.0	1.0	wszechkier.	76.2	8.0
9	9	103.3	336.0	1.0	wszechkier.	76.2	8.0
10	10	102.6	345.9	1.0	wszechkier.	76.2	8.0
11	11	101.9	355.9	1.0	wszechkier.	76.2	8.0
12	12	101.2	365.9	1.0	wszechkier.	76.2	8.0
13	13	100.5	375.9	1.0	wszechkier.	76.2	8.0
14	14	99.9	385.8	1.0	wszechkier.	76.2	8.0
15	15	99.2	395.8	1.0	wszechkier.	76.2	8.0
16	16	98.6	405.8	1.0	wszechkier.	76.2	8.0
17	17	98.0	415.8	1.0	wszechkier.	76.2	8.0
18	18	97.3	425.8	1.0	wszechkier.	76.2	8.0
19	19	55.6	313.9	7.0	wszechkier.	70.0	8.0
20	20	56.3	308.4	8.0	wszechkier.	70.0	8.0
21	21	64.9	313.5	1.0	wszechkier.	70.0	8.0
22	22	69.4	313.7	1.0	wszechkier.	70.0	8.0
23	23	71.2	307.3	1.0	wszechkier.	70.0	8.0
24	24	115.6	344.8	18.0	wszechkier.	60.0	8.0
25	25	114.7	350.6	18.0	wszechkier.	60.0	8.0
26	26	117.3	352.4	18.0	wszechkier.	60.0	8.0
27	27	119.2	343.2	18.0	wszechkier.	60.0	8.0

LAW - poziom mocy akustycznej źródła nominalny

tD - czas pracy źródła w przedziale 8 kolejnych najmniej korzystnych godzin dnia

#### 7. Ekran - budynek

Lp	Symbol	współrzędne		x.y		wierzchołków ekranu [m]		ho		h1		współczynniki odbicia ścian nr 1 - 4
		x1	y1	x2	y2	x3	y3	x4	y4	m	m	
1	1	106.5	112.1	113.7	108.1	433.3	434.5	426.6	425.7	4.5	0.0	1.0
2	2	108.1	122.6	129.8	114.0	425.7	428.1	392.0	392.0	4.5	0.0	1.0
3	3	50.6	68.5	70.9	52.8	306.0	306.8	267.3	266.0	6.8	0.0	1.0
4	4	68.6	76.5	78.0	70.2	305.3	305.7	278.3	278.0	6.8	0.0	1.0
5	5	76.2	94.0	96.0	78.0	312.0	313.1	279.3	278.0	8.1	0.0	1.0
6	6	70.2	106.1	108.2	72.4	278.0	279.8	243.5	241.4	10.8	0.0	1.0
7	7	52.2	70.9	72.0	53.2	266.2	267.3	249.3	248.0	10.8	0.0	1.0
8	8	63.9	72.0	72.5	64.4	248.8	249.3	238.8	238.4	10.8	0.0	1.0
9	9	140.5	169.4	170.2	141.3	258.8	263.8	259.0	254.0	7.7	0.0	1.0

#### 8. Źródła hałasu typu budynek

Lp	Symbol	współrzędne wierzchołków budynku [m]								h0 m	h1 m
		A(x1. y1)		B(x2. y2)		C(x3. y3)		D(x4. y4)			
1	1	109.7	388.5	153.1	396.0	161.7	348.6	112.7	339.2	0.0	17.52
2	2	119.6	273.3	166.4	281.3	169.4	263.8	122.6	255.8	0.0	7.70
3	3	50.1	315.4	60.3	316.0	61.0	306.5	50.6	306.0	0.0	5.00

#### 8.1 Opis ścian budynków

Lp	Budynek	wielkość	Jedn.	Ściana AB	Ściana BC	Ściana CD	Ściana DA	dach
1	1	wsp. odbicia	-	1.0	1.0	1.0	1.0	1.0
		LAWew dzień		77.70	77.70	77.70	77.70	77.30
		Izolacyjność	dB(A)	31.00	31.00	31.00	31.00	31.00
2	2	wsp. odbicia	-	1.0	1.0	1.0	1.0	1.0
		LAWew dzień		78.40	80.10	78.40	80.10	77.70
		Izolacyjność	dB(A)	31.00	31.00	31.00	31.00	31.00
3	3	wsp. odbicia	-	1.0	1.0	1.0	1.0	1.0
		LAWew dzień		81.60	81.70	81.60	81.70	81.00
		Izolacyjność	dB(A)	31.00	31.00	31.00	31.00	31.00

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 LAwew dzień - poziom dźwięku A wewnątrz budynku w przedziale 8 kolejnych najmniej korzystnych godzin dnia

#### 9. Punkty obserwacji

Lp	Symbol	współrzędne punktu			Poziom dźwięku w porze dnia
		x	y	z	
		m	m	m	dB(A)
1	1	24.9	683.3	4.0	27.1
2	2	49.3	690.2	4.0	27.1
3	3	56.4	663.2	4.0	27.9
4	4	121.1	682.7	4.0	26.7
5	5	132.6	639.0	4.0	27.3
6	6	67.5	617.7	4.0	29.5
7	7	76.6	581.4	4.0	30.9
8	8	81.6	560.8	4.0	31.9
9	9	89.2	556.8	4.0	32.1
10	10	93.7	537.7	4.0	33.1
11	11	108.6	480.1	4.0	37.2
12	12	116.7	432.6	4.0	36.7
13	13	125.8	433.8	4.0	35.3
14	14	132.2	397.9	4.0	38.9
15	15	155.4	400.2	4.0	34.4
16	16	155.1	403.6	4.0	33.8
17	17	224.2	417.4	4.0	29.2
18	18	266.4	425.8	4.0	28.1
19	19	279.4	357.4	4.0	30.6
20	20	242.6	350.7	4.0	32.7
21	21	193.4	341.9	4.0	36.3
22	22	144.2	333.0	4.0	42.3
23	23	112.5	327.3	4.0	50.8
24	24	114.3	302.7	4.0	50.4
25	25	156.6	310.8	4.0	40.8
26	26	205.8	320.1	4.0	35.5
27	27	236.4	325.9	4.0	33.2
28	28	241.8	323.3	4.0	32.9
29	29	245.7	307.6	4.0	32.6
30	30	199.9	299.0	4.0	35.9
31	31	184.3	299.4	4.0	37.4
32	32	181.0	310.3	4.0	37.7
33	33	174.4	309.8	4.0	38.4
34	34	177.2	295.1	4.0	38.2
35	35	115.6	284.3	4.0	53.7
36	36	116.1	276.2	4.0	50.9
37	37	145.5	281.2	4.0	43.8
38	38	169.3	285.3	4.0	39.3
39	39	176.1	250.6	4.0	27.8
40	40	144.3	244.4	4.0	30.3
41	41	136.0	249.2	4.0	35.5
42	42	117.4	248.1	4.0	41.1
43	43	117.7	237.1	4.0	39.1
44	44	49.4	233.8	4.0	25.1
45	45	47.7	259.5	4.0	27.7
46	46	43.7	320.5	4.0	43.1
47	47	82.7	324.3	4.0	49.2
48	48	79.5	373.9	4.0	46.4
49	49	76.2	423.8	4.0	44.4
50	50	64.5	487.8	4.0	36.1
51	51	96.1	492.8	4.0	36.2
52	52	95.5	496.7	4.0	35.9
53	53	64.6	492.0	4.0	35.8
54	54	50.8	557.7	4.0	31.7
55	55	40.6	606.7	4.0	29.7
56	56	30.5	655.7	4.0	28.0
57	57	122.3	176.3	4.0	33.5
58	58	200.2	189.9	4.0	24.5
59	59	249.4	199.0	4.0	24.8
60	60	293.0	206.7	4.0	25.7
61	61	295.4	151.0	4.0	22.3
62	62	297.3	101.1	4.0	20.0
63	63	298.5	68.0	4.0	18.9
64	64	233.4	52.8	4.0	20.7
65	65	184.6	41.6	4.0	25.6
66	66	133.0	29.7	4.0	27.2
67	67	129.0	76.6	4.0	28.8
68	68	124.8	126.4	4.0	30.7
69	69	122.4	154.4	4.0	32.2
70	70	137.2	427.5	4.0	34.7
71	71	157.8	409.5	4.0	32.8
72	72	205.7	419.1	4.0	29.1
73	73	186.1	611.8	4.0	25.1
74	74	296.0	480.0	4.0	24.5
75	75	240.1	453.5	4.0	26.5

koniec danych

Poziom hałasu w sieci  
 LAeq . pory dnia

Nr	współrzędne punktów			Poziom dźwięku w porze dnia
	x	y	z	
punktu	m	m	m	dB(A)
1.0	0.00	0.00	4.0	19.08
2.0	0.00	20.00	4.0	19.50
3.0	0.00	40.00	4.0	19.95
4.0	0.00	60.00	4.0	20.44
5.0	0.00	80.00	4.0	20.94
6.0	0.00	100.00	4.0	21.54
7.0	0.00	120.00	4.0	22.06
8.0	0.00	140.00	4.0	22.44
9.0	0.00	160.00	4.0	23.19
10.0	0.00	180.00	4.0	24.15

11.0	0.00	200.00	4.0	25.84
12.0	0.00	220.00	4.0	27.53
13.0	0.00	240.00	4.0	29.54
14.0	0.00	260.00	4.0	31.56
15.0	0.00	280.00	4.0	33.47
16.0	0.00	300.00	4.0	35.18
17.0	0.00	320.00	4.0	36.70
18.0	0.00	340.00	4.0	36.94
19.0	0.00	360.00	4.0	36.96
20.0	0.00	380.00	4.0	36.74
21.0	0.00	400.00	4.0	36.47
22.0	0.00	420.00	4.0	35.98
23.0	0.00	440.00	4.0	35.36
24.0	0.00	460.00	4.0	34.69
25.0	0.00	480.00	4.0	33.94
26.0	0.00	500.00	4.0	33.12
27.0	0.00	520.00	4.0	32.30
28.0	0.00	540.00	4.0	31.58
29.0	0.00	560.00	4.0	30.83
30.0	0.00	580.00	4.0	30.12
31.0	0.00	600.00	4.0	29.44
32.0	0.00	620.00	4.0	28.78
33.0	0.00	640.00	4.0	28.18
34.0	0.00	660.00	4.0	27.60
35.0	0.00	680.00	4.0	27.05
36.0	0.00	700.00	4.0	26.53
37.0	0.00	720.00	4.0	26.04
38.0	0.00	740.00	4.0	25.57
39.0	20.00	0.00	4.0	19.41
40.0	20.00	20.00	4.0	19.81
41.0	20.00	40.00	4.0	20.24
42.0	20.00	60.00	4.0	20.69
43.0	20.00	80.00	4.0	21.17
44.0	20.00	100.00	4.0	21.72
45.0	20.00	120.00	4.0	22.22
46.0	20.00	140.00	4.0	22.85
47.0	20.00	160.00	4.0	23.23
48.0	20.00	180.00	4.0	23.93
49.0	20.00	200.00	4.0	24.82
50.0	20.00	220.00	4.0	26.12
51.0	20.00	240.00	4.0	28.26
52.0	20.00	260.00	4.0	31.28
53.0	20.00	280.00	4.0	34.00
54.0	20.00	300.00	4.0	36.81
55.0	20.00	320.00	4.0	38.68
56.0	20.00	340.00	4.0	38.93
57.0	20.00	360.00	4.0	38.75
58.0	20.00	380.00	4.0	38.48
59.0	20.00	400.00	4.0	38.04
60.0	20.00	420.00	4.0	37.45
61.0	20.00	440.00	4.0	36.76
62.0	20.00	460.00	4.0	35.81
63.0	20.00	480.00	4.0	34.87
64.0	20.00	500.00	4.0	33.88
65.0	20.00	520.00	4.0	32.93
66.0	20.00	540.00	4.0	32.04
67.0	20.00	560.00	4.0	31.20
68.0	20.00	580.00	4.0	30.41
69.0	20.00	600.00	4.0	29.68
70.0	20.00	620.00	4.0	29.01
71.0	20.00	640.00	4.0	28.37
72.0	20.00	660.00	4.0	27.77
73.0	20.00	680.00	4.0	27.21
74.0	20.00	700.00	4.0	26.67
75.0	20.00	720.00	4.0	26.16
76.0	20.00	740.00	4.0	25.68
77.0	40.00	0.00	4.0	18.83
78.0	40.00	20.00	4.0	19.42
79.0	40.00	40.00	4.0	19.99
80.0	40.00	60.00	4.0	20.63
81.0	40.00	80.00	4.0	21.23
82.0	40.00	100.00	4.0	21.86
83.0	40.00	120.00	4.0	22.30
84.0	40.00	140.00	4.0	22.81
85.0	40.00	160.00	4.0	23.71
86.0	40.00	180.00	4.0	24.06
87.0	40.00	200.00	4.0	24.69
88.0	40.00	220.00	4.0	25.67
89.0	40.00	240.00	4.0	27.12
90.0	40.00	260.00	4.0	28.89
91.0	40.00	280.00	4.0	32.00
92.0	40.00	300.00	4.0	38.43
93.0	40.00	320.00	4.0	42.03
94.0	40.00	340.00	4.0	41.30
95.0	40.00	360.00	4.0	40.84
96.0	40.00	380.00	4.0	40.41
97.0	40.00	400.00	4.0	40.04
98.0	40.00	420.00	4.0	39.29
99.0	40.00	440.00	4.0	38.28
100.0	40.00	460.00	4.0	37.02
101.0	40.00	480.00	4.0	35.74
102.0	40.00	500.00	4.0	34.53
103.0	40.00	520.00	4.0	33.42
104.0	40.00	540.00	4.0	32.42
105.0	40.00	560.00	4.0	31.51
106.0	40.00	580.00	4.0	30.68
107.0	40.00	600.00	4.0	29.90
108.0	40.00	620.00	4.0	29.19
109.0	40.00	640.00	4.0	28.53
110.0	40.00	660.00	4.0	27.91
111.0	40.00	680.00	4.0	27.33
112.0	40.00	700.00	4.0	26.78
113.0	40.00	720.00	4.0	26.26
114.0	40.00	740.00	4.0	25.78
115.0	60.00	0.00	4.0	19.07
116.0	60.00	20.00	4.0	19.46
117.0	60.00	40.00	4.0	19.91

118.0	60.00	60.00	4.0	20.42
119.0	60.00	80.00	4.0	21.03
120.0	60.00	100.00	4.0	21.63
121.0	60.00	120.00	4.0	21.98
122.0	60.00	140.00	4.0	22.60
123.0	60.00	160.00	4.0	23.27
124.0	60.00	180.00	4.0	24.12
125.0	60.00	200.00	4.0	24.67
126.0	60.00	220.00	4.0	24.81
127.0	60.00	240.00	4.0	23.71
128.0	60.00	260.00	4.0	-0.07
129.0	60.00	280.00	4.0	-0.03
130.0	60.00	300.00	4.0	-0.03
131.0	60.00	320.00	4.0	47.86
132.0	60.00	340.00	4.0	43.91
133.0	60.00	360.00	4.0	43.20
134.0	60.00	380.00	4.0	42.92
135.0	60.00	400.00	4.0	42.51
136.0	60.00	420.00	4.0	41.66
137.0	60.00	440.00	4.0	40.13
138.0	60.00	460.00	4.0	38.28
139.0	60.00	480.00	4.0	36.56
140.0	60.00	500.00	4.0	35.09
141.0	60.00	520.00	4.0	33.83
142.0	60.00	540.00	4.0	32.73
143.0	60.00	560.00	4.0	31.75
144.0	60.00	580.00	4.0	30.87
145.0	60.00	600.00	4.0	30.07
146.0	60.00	620.00	4.0	29.34
147.0	60.00	640.00	4.0	28.67
148.0	60.00	660.00	4.0	28.03
149.0	60.00	680.00	4.0	27.44
150.0	60.00	700.00	4.0	26.88
151.0	60.00	720.00	4.0	26.35
152.0	60.00	740.00	4.0	25.84
153.0	80.00	0.00	4.0	20.77
154.0	80.00	20.00	4.0	21.29
155.0	80.00	40.00	4.0	21.85
156.0	80.00	60.00	4.0	21.39
157.0	80.00	80.00	4.0	21.78
158.0	80.00	100.00	4.0	22.33
159.0	80.00	120.00	4.0	22.92
160.0	80.00	140.00	4.0	23.47
161.0	80.00	160.00	4.0	24.01
162.0	80.00	180.00	4.0	24.53
163.0	80.00	200.00	4.0	25.13
164.0	80.00	220.00	4.0	25.10
165.0	80.00	240.00	4.0	21.31
166.0	80.00	260.00	4.0	-0.06
167.0	80.00	280.00	4.0	-0.05
168.0	80.00	300.00	4.0	-0.05
169.0	80.00	320.00	4.0	49.72
170.0	80.00	340.00	4.0	46.94
171.0	80.00	360.00	4.0	46.57
172.0	80.00	380.00	4.0	46.54
173.0	80.00	400.00	4.0	46.41
174.0	80.00	420.00	4.0	45.72
175.0	80.00	440.00	4.0	42.76
176.0	80.00	460.00	4.0	39.49
177.0	80.00	480.00	4.0	37.21
178.0	80.00	500.00	4.0	35.50
179.0	80.00	520.00	4.0	34.12
180.0	80.00	540.00	4.0	32.95
181.0	80.00	560.00	4.0	31.92
182.0	80.00	580.00	4.0	31.01
183.0	80.00	600.00	4.0	30.19
184.0	80.00	620.00	4.0	29.44
185.0	80.00	640.00	4.0	28.73
186.0	80.00	660.00	4.0	28.09
187.0	80.00	680.00	4.0	27.48
188.0	80.00	700.00	4.0	26.92
189.0	80.00	720.00	4.0	26.38
190.0	80.00	740.00	4.0	25.87
191.0	100.00	0.00	4.0	21.72
192.0	100.00	20.00	4.0	22.26
193.0	100.00	40.00	4.0	22.85
194.0	100.00	60.00	4.0	23.48
195.0	100.00	80.00	4.0	24.23
196.0	100.00	100.00	4.0	24.96
197.0	100.00	120.00	4.0	25.78
198.0	100.00	140.00	4.0	26.67
199.0	100.00	160.00	4.0	27.65
200.0	100.00	180.00	4.0	28.80
201.0	100.00	200.00	4.0	28.42
202.0	100.00	220.00	4.0	28.72
203.0	100.00	240.00	4.0	24.88
204.0	100.00	260.00	4.0	-0.06
205.0	100.00	280.00	4.0	49.42
206.0	100.00	300.00	4.0	51.90
207.0	100.00	320.00	4.0	54.01
208.0	100.00	340.00	4.0	53.44
209.0	100.00	360.00	4.0	53.92
210.0	100.00	380.00	4.0	54.13
211.0	100.00	400.00	4.0	53.92
212.0	100.00	420.00	4.0	53.13
213.0	100.00	440.00	4.0	44.88
214.0	100.00	460.00	4.0	40.02
215.0	100.00	480.00	4.0	37.46
216.0	100.00	500.00	4.0	35.65
217.0	100.00	520.00	4.0	34.21
218.0	100.00	540.00	4.0	33.01
219.0	100.00	560.00	4.0	32.07
220.0	100.00	580.00	4.0	31.12
221.0	100.00	600.00	4.0	30.28
222.0	100.00	620.00	4.0	29.53
223.0	100.00	640.00	4.0	28.78
224.0	100.00	660.00	4.0	28.12

225.0	100.00	680.00	4.0	27.51
226.0	100.00	700.00	4.0	26.84
227.0	100.00	720.00	4.0	26.31
228.0	100.00	740.00	4.0	25.79
229.0	120.00	0.00	4.0	24.57
230.0	120.00	20.00	4.0	25.43
231.0	120.00	40.00	4.0	26.80
232.0	120.00	60.00	4.0	28.11
233.0	120.00	80.00	4.0	28.83
234.0	120.00	100.00	4.0	29.59
235.0	120.00	120.00	4.0	30.49
236.0	120.00	140.00	4.0	31.42
237.0	120.00	160.00	4.0	32.48
238.0	120.00	180.00	4.0	33.72
239.0	120.00	200.00	4.0	35.19
240.0	120.00	220.00	4.0	37.06
241.0	120.00	240.00	4.0	39.71
242.0	120.00	260.00	4.0	43.96
243.0	120.00	280.00	4.0	50.40
244.0	120.00	300.00	4.0	48.34
245.0	120.00	320.00	4.0	48.09
246.0	120.00	340.00	4.0	45.93
247.0	120.00	360.00	4.0	-1.00
248.0	120.00	380.00	4.0	-1.00
249.0	120.00	400.00	4.0	-0.02
250.0	120.00	420.00	4.0	-0.02
251.0	120.00	440.00	4.0	36.44
252.0	120.00	460.00	4.0	36.64
253.0	120.00	480.00	4.0	35.31
254.0	120.00	500.00	4.0	34.02
255.0	120.00	520.00	4.0	32.93
256.0	120.00	540.00	4.0	31.98
257.0	120.00	560.00	4.0	30.96
258.0	120.00	580.00	4.0	30.04
259.0	120.00	600.00	4.0	29.31
260.0	120.00	620.00	4.0	28.65
261.0	120.00	640.00	4.0	27.95
262.0	120.00	660.00	4.0	27.38
263.0	120.00	680.00	4.0	26.79
264.0	120.00	700.00	4.0	26.22
265.0	120.00	720.00	4.0	25.71
266.0	120.00	740.00	4.0	25.28
267.0	140.00	0.00	4.0	26.33
268.0	140.00	20.00	4.0	26.89
269.0	140.00	40.00	4.0	27.49
270.0	140.00	60.00	4.0	28.10
271.0	140.00	80.00	4.0	28.80
272.0	140.00	100.00	4.0	29.55
273.0	140.00	120.00	4.0	30.38
274.0	140.00	140.00	4.0	31.16
275.0	140.00	160.00	4.0	32.03
276.0	140.00	180.00	4.0	32.91
277.0	140.00	200.00	4.0	33.54
278.0	140.00	220.00	4.0	32.55
279.0	140.00	240.00	4.0	31.21
280.0	140.00	260.00	4.0	-2.00
281.0	140.00	280.00	4.0	44.59
282.0	140.00	300.00	4.0	43.43
283.0	140.00	320.00	4.0	43.38
284.0	140.00	340.00	4.0	43.22
285.0	140.00	360.00	4.0	-1.00
286.0	140.00	380.00	4.0	-1.00
287.0	140.00	400.00	4.0	37.43
288.0	140.00	420.00	4.0	34.44
289.0	140.00	440.00	4.0	33.20
290.0	140.00	460.00	4.0	32.55
291.0	140.00	480.00	4.0	32.26
292.0	140.00	500.00	4.0	31.17
293.0	140.00	520.00	4.0	30.72
294.0	140.00	540.00	4.0	29.80
295.0	140.00	560.00	4.0	29.32
296.0	140.00	580.00	4.0	28.53
297.0	140.00	600.00	4.0	27.83
298.0	140.00	620.00	4.0	27.39
299.0	140.00	640.00	4.0	26.83
300.0	140.00	660.00	4.0	26.23
301.0	140.00	680.00	4.0	25.83
302.0	140.00	700.00	4.0	25.29
303.0	140.00	720.00	4.0	24.82
304.0	140.00	740.00	4.0	24.38
305.0	160.00	0.00	4.0	26.13
306.0	160.00	20.00	4.0	26.51
307.0	160.00	40.00	4.0	27.05
308.0	160.00	60.00	4.0	27.44
309.0	160.00	80.00	4.0	27.80
310.0	160.00	100.00	4.0	28.52
311.0	160.00	120.00	4.0	28.81
312.0	160.00	140.00	4.0	29.27
313.0	160.00	160.00	4.0	29.10
314.0	160.00	180.00	4.0	28.62
315.0	160.00	200.00	4.0	27.48
316.0	160.00	220.00	4.0	27.38
317.0	160.00	240.00	4.0	28.12
318.0	160.00	260.00	4.0	-0.09
319.0	160.00	280.00	4.0	-2.00
320.0	160.00	300.00	4.0	40.55
321.0	160.00	320.00	4.0	40.29
322.0	160.00	340.00	4.0	40.29
323.0	160.00	360.00	4.0	37.53
324.0	160.00	380.00	4.0	37.71
325.0	160.00	400.00	4.0	33.90
326.0	160.00	420.00	4.0	31.70
327.0	160.00	440.00	4.0	30.58
328.0	160.00	460.00	4.0	29.87
329.0	160.00	480.00	4.0	30.51
330.0	160.00	500.00	4.0	29.51
331.0	160.00	520.00	4.0	28.75

332.0	160.00	540.00	4.0	27.97
333.0	160.00	560.00	4.0	27.82
334.0	160.00	580.00	4.0	27.14
335.0	160.00	600.00	4.0	26.54
336.0	160.00	620.00	4.0	26.31
337.0	160.00	640.00	4.0	25.77
338.0	160.00	660.00	4.0	25.23
339.0	160.00	680.00	4.0	24.72
340.0	160.00	700.00	4.0	24.26
341.0	160.00	720.00	4.0	24.03
342.0	160.00	740.00	4.0	23.58
343.0	180.00	0.00	4.0	24.91
344.0	180.00	20.00	4.0	25.42
345.0	180.00	40.00	4.0	25.69
346.0	180.00	60.00	4.0	26.20
347.0	180.00	80.00	4.0	26.47
348.0	180.00	100.00	4.0	26.19
349.0	180.00	120.00	4.0	26.19
350.0	180.00	140.00	4.0	26.04
351.0	180.00	160.00	4.0	25.33
352.0	180.00	180.00	4.0	25.55
353.0	180.00	200.00	4.0	26.19
354.0	180.00	220.00	4.0	26.68
355.0	180.00	240.00	4.0	27.47
356.0	180.00	260.00	4.0	31.17
357.0	180.00	280.00	4.0	37.59
358.0	180.00	300.00	4.0	37.88
359.0	180.00	320.00	4.0	37.82
360.0	180.00	340.00	4.0	37.54
361.0	180.00	360.00	4.0	36.15
362.0	180.00	380.00	4.0	33.96
363.0	180.00	400.00	4.0	33.13
364.0	180.00	420.00	4.0	30.35
365.0	180.00	440.00	4.0	29.31
366.0	180.00	460.00	4.0	28.14
367.0	180.00	480.00	4.0	27.86
368.0	180.00	500.00	4.0	28.32
369.0	180.00	520.00	4.0	27.51
370.0	180.00	540.00	4.0	26.86
371.0	180.00	560.00	4.0	26.26
372.0	180.00	580.00	4.0	25.68
373.0	180.00	600.00	4.0	25.64
374.0	180.00	620.00	4.0	25.12
375.0	180.00	640.00	4.0	24.61
376.0	180.00	660.00	4.0	24.15
377.0	180.00	680.00	4.0	23.72
378.0	180.00	700.00	4.0	23.63
379.0	180.00	720.00	4.0	23.20
380.0	180.00	740.00	4.0	22.80
381.0	200.00	0.00	4.0	23.98
382.0	200.00	20.00	4.0	24.41
383.0	200.00	40.00	4.0	24.07
384.0	200.00	60.00	4.0	24.47
385.0	200.00	80.00	4.0	24.39
386.0	200.00	100.00	4.0	24.14
387.0	200.00	120.00	4.0	23.50
388.0	200.00	140.00	4.0	23.13
389.0	200.00	160.00	4.0	23.37
390.0	200.00	180.00	4.0	24.11
391.0	200.00	200.00	4.0	24.91
392.0	200.00	220.00	4.0	25.97
393.0	200.00	240.00	4.0	27.33
394.0	200.00	260.00	4.0	32.16
395.0	200.00	280.00	4.0	35.69
396.0	200.00	300.00	4.0	35.91
397.0	200.00	320.00	4.0	35.96
398.0	200.00	340.00	4.0	35.75
399.0	200.00	360.00	4.0	35.55
400.0	200.00	380.00	4.0	33.06
401.0	200.00	400.00	4.0	31.60
402.0	200.00	420.00	4.0	29.23
403.0	200.00	440.00	4.0	28.22
404.0	200.00	460.00	4.0	27.15
405.0	200.00	480.00	4.0	26.55
406.0	200.00	500.00	4.0	26.34
407.0	200.00	520.00	4.0	26.64
408.0	200.00	540.00	4.0	25.99
409.0	200.00	560.00	4.0	25.41
410.0	200.00	580.00	4.0	24.87
411.0	200.00	600.00	4.0	24.33
412.0	200.00	620.00	4.0	23.85
413.0	200.00	640.00	4.0	23.92
414.0	200.00	660.00	4.0	23.45
415.0	200.00	680.00	4.0	23.04
416.0	200.00	700.00	4.0	22.62
417.0	200.00	720.00	4.0	22.25
418.0	200.00	740.00	4.0	21.91
419.0	220.00	0.00	4.0	22.59
420.0	220.00	20.00	4.0	22.94
421.0	220.00	40.00	4.0	22.06
422.0	220.00	60.00	4.0	22.24
423.0	220.00	80.00	4.0	21.56
424.0	220.00	100.00	4.0	21.60
425.0	220.00	120.00	4.0	21.89
426.0	220.00	140.00	4.0	22.25
427.0	220.00	160.00	4.0	22.80
428.0	220.00	180.00	4.0	23.55
429.0	220.00	200.00	4.0	24.56
430.0	220.00	220.00	4.0	25.66
431.0	220.00	240.00	4.0	28.93
432.0	220.00	260.00	4.0	31.81
433.0	220.00	280.00	4.0	33.83
434.0	220.00	300.00	4.0	34.28
435.0	220.00	320.00	4.0	34.38
436.0	220.00	340.00	4.0	34.24
437.0	220.00	360.00	4.0	34.30
438.0	220.00	380.00	4.0	32.51

439.0	220.00	400.00	4.0	30.98
440.0	220.00	420.00	4.0	28.90
441.0	220.00	440.00	4.0	27.43
442.0	220.00	460.00	4.0	26.30
443.0	220.00	480.00	4.0	25.55
444.0	220.00	500.00	4.0	25.16
445.0	220.00	520.00	4.0	24.86
446.0	220.00	540.00	4.0	25.12
447.0	220.00	560.00	4.0	24.69
448.0	220.00	580.00	4.0	24.18
449.0	220.00	600.00	4.0	23.73
450.0	220.00	620.00	4.0	23.27
451.0	220.00	640.00	4.0	22.81
452.0	220.00	660.00	4.0	22.39
453.0	220.00	680.00	4.0	22.44
454.0	220.00	700.00	4.0	22.07
455.0	220.00	720.00	4.0	21.70
456.0	220.00	740.00	4.0	21.35
457.0	240.00	0.00	4.0	20.72
458.0	240.00	20.00	4.0	20.89
459.0	240.00	40.00	4.0	20.24
460.0	240.00	60.00	4.0	20.49
461.0	240.00	80.00	4.0	20.58
462.0	240.00	100.00	4.0	20.77
463.0	240.00	120.00	4.0	21.16
464.0	240.00	140.00	4.0	21.71
465.0	240.00	160.00	4.0	22.41
466.0	240.00	180.00	4.0	23.50
467.0	240.00	200.00	4.0	24.50
468.0	240.00	220.00	4.0	26.80
469.0	240.00	240.00	4.0	29.26
470.0	240.00	260.00	4.0	30.79
471.0	240.00	280.00	4.0	32.43
472.0	240.00	300.00	4.0	32.90
473.0	240.00	320.00	4.0	33.02
474.0	240.00	340.00	4.0	32.92
475.0	240.00	360.00	4.0	32.71
476.0	240.00	380.00	4.0	31.91
477.0	240.00	400.00	4.0	30.33
478.0	240.00	420.00	4.0	28.84
479.0	240.00	440.00	4.0	27.26
480.0	240.00	460.00	4.0	25.74
481.0	240.00	480.00	4.0	24.87
482.0	240.00	500.00	4.0	24.33
483.0	240.00	520.00	4.0	23.97
484.0	240.00	540.00	4.0	23.58
485.0	240.00	560.00	4.0	23.87
486.0	240.00	580.00	4.0	23.45
487.0	240.00	600.00	4.0	23.07
488.0	240.00	620.00	4.0	22.67
489.0	240.00	640.00	4.0	22.29
490.0	240.00	660.00	4.0	21.90
491.0	240.00	680.00	4.0	21.50
492.0	240.00	700.00	4.0	21.13
493.0	240.00	720.00	4.0	21.23
494.0	240.00	740.00	4.0	20.91
495.0	260.00	0.00	4.0	19.99
496.0	260.00	20.00	4.0	19.33
497.0	260.00	40.00	4.0	19.40
498.0	260.00	60.00	4.0	19.53
499.0	260.00	80.00	4.0	19.82
500.0	260.00	100.00	4.0	20.25
501.0	260.00	120.00	4.0	20.74
502.0	260.00	140.00	4.0	21.42
503.0	260.00	160.00	4.0	22.34
504.0	260.00	180.00	4.0	23.26
505.0	260.00	200.00	4.0	24.81
506.0	260.00	220.00	4.0	27.11
507.0	260.00	240.00	4.0	28.89
508.0	260.00	260.00	4.0	29.79
509.0	260.00	280.00	4.0	31.22
510.0	260.00	300.00	4.0	31.69
511.0	260.00	320.00	4.0	31.84
512.0	260.00	340.00	4.0	31.76
513.0	260.00	360.00	4.0	31.59
514.0	260.00	380.00	4.0	31.30
515.0	260.00	400.00	4.0	29.84
516.0	260.00	420.00	4.0	28.45
517.0	260.00	440.00	4.0	27.41
518.0	260.00	460.00	4.0	26.09
519.0	260.00	480.00	4.0	24.87
520.0	260.00	500.00	4.0	23.73
521.0	260.00	520.00	4.0	23.27
522.0	260.00	540.00	4.0	22.98
523.0	260.00	560.00	4.0	23.35
524.0	260.00	580.00	4.0	22.79
525.0	260.00	600.00	4.0	22.41
526.0	260.00	620.00	4.0	22.08
527.0	260.00	640.00	4.0	21.71
528.0	260.00	660.00	4.0	21.36
529.0	260.00	680.00	4.0	21.04
530.0	260.00	700.00	4.0	20.68
531.0	260.00	720.00	4.0	20.32
532.0	260.00	740.00	4.0	19.98
533.0	280.00	0.00	4.0	18.36
534.0	280.00	20.00	4.0	18.46
535.0	280.00	40.00	4.0	18.70
536.0	280.00	60.00	4.0	19.03
537.0	280.00	80.00	4.0	19.40
538.0	280.00	100.00	4.0	19.91
539.0	280.00	120.00	4.0	20.71
540.0	280.00	140.00	4.0	21.32
541.0	280.00	160.00	4.0	22.17
542.0	280.00	180.00	4.0	23.67
543.0	280.00	200.00	4.0	25.04
544.0	280.00	220.00	4.0	27.03
545.0	280.00	240.00	4.0	28.16

546.0	280.00	260.00	4.0	29.15
547.0	280.00	280.00	4.0	30.20
548.0	280.00	300.00	4.0	30.76
549.0	280.00	320.00	4.0	30.78
550.0	280.00	340.00	4.0	30.72
551.0	280.00	360.00	4.0	30.58
552.0	280.00	380.00	4.0	30.37
553.0	280.00	400.00	4.0	29.53
554.0	280.00	420.00	4.0	27.82
555.0	280.00	440.00	4.0	27.19
556.0	280.00	460.00	4.0	25.99
557.0	280.00	480.00	4.0	24.85
558.0	280.00	500.00	4.0	23.77
559.0	280.00	520.00	4.0	22.75
560.0	280.00	540.00	4.0	22.35
561.0	280.00	560.00	4.0	22.04
562.0	280.00	580.00	4.0	22.39
563.0	280.00	600.00	4.0	21.82
564.0	280.00	620.00	4.0	21.39
565.0	280.00	640.00	4.0	21.11
566.0	280.00	660.00	4.0	20.84
567.0	280.00	680.00	4.0	20.52
568.0	280.00	700.00	4.0	20.22
569.0	280.00	720.00	4.0	19.93
570.0	280.00	740.00	4.0	19.59
571.0	300.00	0.00	4.0	17.69
572.0	300.00	20.00	4.0	17.96
573.0	300.00	40.00	4.0	18.28
574.0	300.00	60.00	4.0	18.66
575.0	300.00	80.00	4.0	19.14
576.0	300.00	100.00	4.0	19.89
577.0	300.00	120.00	4.0	20.41
578.0	300.00	140.00	4.0	21.18
579.0	300.00	160.00	4.0	22.58
580.0	300.00	180.00	4.0	23.83
581.0	300.00	200.00	4.0	25.29
582.0	300.00	220.00	4.0	26.45
583.0	300.00	240.00	4.0	27.45
584.0	300.00	260.00	4.0	28.29
585.0	300.00	280.00	4.0	29.27
586.0	300.00	300.00	4.0	29.81
587.0	300.00	320.00	4.0	29.83
588.0	300.00	340.00	4.0	29.78
589.0	300.00	360.00	4.0	29.67
590.0	300.00	380.00	4.0	29.51
591.0	300.00	400.00	4.0	29.09
592.0	300.00	420.00	4.0	28.09
593.0	300.00	440.00	4.0	26.64
594.0	300.00	460.00	4.0	25.52
595.0	300.00	480.00	4.0	24.81
596.0	300.00	500.00	4.0	23.79
597.0	300.00	520.00	4.0	22.82
598.0	300.00	540.00	4.0	22.36
599.0	300.00	560.00	4.0	21.54
600.0	300.00	580.00	4.0	21.20
601.0	300.00	600.00	4.0	21.49
602.0	300.00	620.00	4.0	21.01
603.0	300.00	640.00	4.0	20.56
604.0	300.00	660.00	4.0	20.29
605.0	300.00	680.00	4.0	20.06
606.0	300.00	700.00	4.0	19.75
607.0	300.00	720.00	4.0	19.47
608.0	300.00	740.00	4.0	19.20
609.0	320.00	0.00	4.0	17.28
610.0	320.00	20.00	4.0	17.60
611.0	320.00	40.00	4.0	18.00
612.0	320.00	60.00	4.0	18.63
613.0	320.00	80.00	4.0	19.11
614.0	320.00	100.00	4.0	19.59
615.0	320.00	120.00	4.0	20.29
616.0	320.00	140.00	4.0	21.61
617.0	320.00	160.00	4.0	22.87
618.0	320.00	180.00	4.0	23.95
619.0	320.00	200.00	4.0	25.23
620.0	320.00	220.00	4.0	25.85
621.0	320.00	240.00	4.0	26.74
622.0	320.00	260.00	4.0	27.50
623.0	320.00	280.00	4.0	28.42
624.0	320.00	300.00	4.0	28.94
625.0	320.00	320.00	4.0	28.96
626.0	320.00	340.00	4.0	28.92
627.0	320.00	360.00	4.0	28.84
628.0	320.00	380.00	4.0	28.93
629.0	320.00	400.00	4.0	28.42
630.0	320.00	420.00	4.0	27.45
631.0	320.00	440.00	4.0	26.15
632.0	320.00	460.00	4.0	25.39
633.0	320.00	480.00	4.0	24.38
634.0	320.00	500.00	4.0	23.80
635.0	320.00	520.00	4.0	22.86
636.0	320.00	540.00	4.0	21.96
637.0	320.00	560.00	4.0	21.56
638.0	320.00	580.00	4.0	20.79
639.0	320.00	600.00	4.0	20.44
640.0	320.00	620.00	4.0	20.69
641.0	320.00	640.00	4.0	20.23
642.0	320.00	660.00	4.0	19.85
643.0	320.00	680.00	4.0	19.56
644.0	320.00	700.00	4.0	19.25
645.0	320.00	720.00	4.0	19.05
646.0	320.00	740.00	4.0	18.78
647.0	340.00	0.00	4.0	16.97
648.0	340.00	20.00	4.0	17.35
649.0	340.00	40.00	4.0	17.98
650.0	340.00	60.00	4.0	18.38
651.0	340.00	80.00	4.0	18.85
652.0	340.00	100.00	4.0	19.49



653.0	340.00	120.00	4.0	20.74
654.0	340.00	140.00	4.0	21.88
655.0	340.00	160.00	4.0	22.94
656.0	340.00	180.00	4.0	23.75
657.0	340.00	200.00	4.0	24.73
658.0	340.00	220.00	4.0	25.57
659.0	340.00	240.00	4.0	26.08
660.0	340.00	260.00	4.0	26.77
661.0	340.00	280.00	4.0	27.64
662.0	340.00	300.00	4.0	28.14
663.0	340.00	320.00	4.0	28.16
664.0	340.00	340.00	4.0	28.13
665.0	340.00	360.00	4.0	28.07
666.0	340.00	380.00	4.0	27.96
667.0	340.00	400.00	4.0	27.73
668.0	340.00	420.00	4.0	27.04
669.0	340.00	440.00	4.0	26.21
670.0	340.00	460.00	4.0	24.97
671.0	340.00	480.00	4.0	24.31
672.0	340.00	500.00	4.0	23.40
673.0	340.00	520.00	4.0	22.90
674.0	340.00	540.00	4.0	22.03
675.0	340.00	560.00	4.0	21.19
676.0	340.00	580.00	4.0	20.83
677.0	340.00	600.00	4.0	20.07
678.0	340.00	620.00	4.0	19.72
679.0	340.00	640.00	4.0	19.96
680.0	340.00	660.00	4.0	19.52
681.0	340.00	680.00	4.0	19.15
682.0	340.00	700.00	4.0	18.83
683.0	340.00	720.00	4.0	18.59
684.0	340.00	740.00	4.0	18.40

Tłumienie przez grunt wg wzoru 9 PN-ISO 9613  
Koniec obliczeń