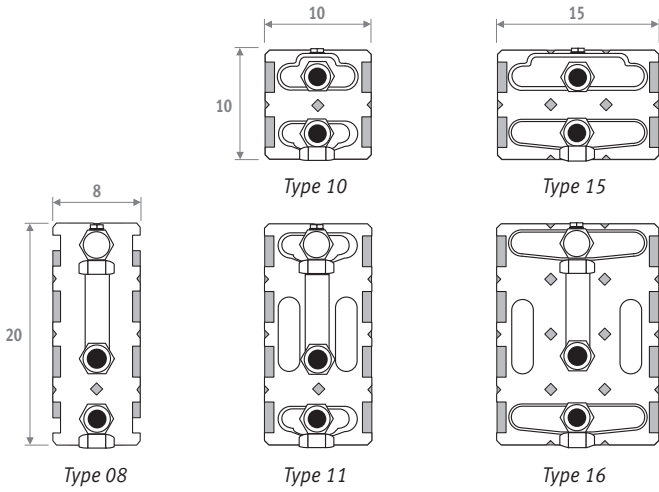




jaga

KNOCKONWOOD
Technical information

KNOCKONWOOD ■ OVERVIEW HEAT EXCHANGERS



Weight and water content without packaging or options.

WEIGHT (IN KG/METRE)				
Type	H	30	55	80
06		8.3	12.3	17.4
10		7.8	12.0	16.9
11		9.9	13.6	18.6
15		8.9	14.1	18.6
16		12.2	19.7	21.1

WATER CONTENT IN LITRE / METRE	
Type	All heights
08	0.63
10	0.65
11	1.33
15	0.98
16	1.98
20	1.32
21	2.66

CORRECTION FACTORS - KNOCKONWOOD

AVERAGE CORRECTION FACTORS ACCORDING TO EN442 - 75/65/20°C

Tv	Tl	Tr	25	30	35	40	45	50	55	60	65	70	75	80	85
90	18		0.45	0.58	0.69	0.79	0.89	0.98	1.07	1.16	1.24	1.34	1.41	1.49	1.56
	20		0.38	0.52	0.63	0.74	0.83	0.92	1.01	1.10	1.18	1.28	1.35	1.43	1.50
	22		0.30	0.46	0.57	0.68	0.78	0.87	0.96	1.04	1.13	1.22	1.30	1.37	1.44
	24		0.20	0.39	0.52	0.62	0.72	0.81	0.90	0.99	1.07	1.15	1.24	1.31	1.38
85	18		0.42	0.54	0.65	0.75	0.84	0.93	1.01	1.10	1.20	1.27	1.34	1.41	
	20		0.36	0.49	0.59	0.69	0.79	0.87	0.96	1.04	1.12	1.21	1.28	1.35	
	22		0.28	0.42	0.54	0.64	0.73	0.82	0.90	0.99	1.06	1.15	1.22	1.30	
	24		0.19	0.36	0.48	0.58	0.68	0.76	0.85	0.93	1.01	1.10	1.17	1.24	
80	18		0.39	0.51	0.61	0.70	0.79	0.88	0.96	1.04	1.12	1.20	1.27		
	20		0.33	0.45	0.56	0.65	0.74	0.82	0.90	0.98	1.07	1.14	1.21		
	22		0.26	0.39	0.50	0.60	0.68	0.77	0.85	0.93	1.01	1.08	1.15		
	24		0.17	0.34	0.45	0.54	0.63	0.72	0.80	0.87	0.96	1.03	1.10		
75	18		0.37	0.47	0.57	0.66	0.74	0.82	0.90	0.99	1.05	1.12			
	20		0.30	0.42	0.52	0.61	0.69	0.77	0.85	0.93	1.00	1.07			
	22		0.24	0.36	0.46	0.55	0.64	0.72	0.79	0.88	0.95	1.01			
	24		0.16	0.31	0.41	0.50	0.59	0.67	0.74	0.83	0.89	0.96			
70	18		0.34	0.44	0.53	0.61	0.69	0.77	0.85	0.92	0.99				
	20		0.28	0.39	0.48	0.56	0.64	0.72	0.80	0.87	0.93				
	22		0.22	0.33	0.43	0.51	0.59	0.67	0.74	0.81	0.88				
	24		0.14	0.28	0.38	0.46	0.54	0.62	0.69	0.76	0.83				
65	18		0.31	0.40	0.49	0.57	0.64	0.71	0.79	0.85					
	20		0.25	0.35	0.44	0.52	0.59	0.66	0.74	0.80					
	22		0.19	0.30	0.39	0.47	0.54	0.61	0.69	0.75					
	24		0.12	0.25	0.34	0.42	0.50	0.57	0.64	0.70					
60	18		0.28	0.37	0.45	0.52	0.59	0.66	0.73						
	20		0.23	0.32	0.40	0.47	0.54	0.62	0.68						
	22		0.17	0.27	0.35	0.43	0.50	0.57	0.63						
	24		0.11	0.23	0.31	0.38	0.45	0.52	0.58						
55	18		0.25	0.33	0.40	0.47	0.55	0.60							
	20		0.20	0.29	0.36	0.43	0.50	0.56							
	22		0.15	0.24	0.32	0.38	0.45	0.51							
	24		0.09	0.20	0.27	0.34	0.40	0.47							
50	18		0.22	0.30	0.36	0.43	0.49								
	20		0.18	0.25	0.32	0.38	0.44								
	22		0.13	0.21	0.28	0.34	0.40								
	24		0.08	0.17	0.24	0.30	0.36								
45	18		0.19	0.26	0.32	0.38									
	20		0.15	0.22	0.28	0.34									
	22		0.11	0.18	0.24	0.30									
	24		0.06	0.14	0.20	0.26									
40	18		0.16	0.22	0.28										
	20		0.12	0.18	0.24										
	22		0.09	0.15	0.20										
	24		0.05	0.12	0.17										
35	18		0.13	0.19											
	20		0.10	0.15											
	22		0.07	0.12											
	24		0.03	0.09											
30	18		0.10												
	20		0.07												
	22		0.04												
	24		0.02												

The indicated outputs with ΔT 50 and ΔT 60 are the exact outputs. ΔT 50 output measured in accordance with EN 442 and ΔT 60 output calculated according to EN 442. An average correction factor is given in this table for all other ΔT outputs, applicable for all dimensions.

KNOCKONWOOD WITH DBE

CORRECTION FACTORS

AVERAGE CORRECTION FACTORS
ACCORDING TO EN442 - 75/65/20°C



Tv	Tl	Tr	25	30	35	40	45	50	55	60	65	70	75	80	85
90	18		0.56	0.67	0.76	0.84	0.92	0.99	1.05	1.11	1.17	1.24	1.29	1.34	1.39
	20		0.49	0.62	0.71	0.80	0.87	0.94	1.01	1.07	1.13	1.20	1.25	1.30	1.35
	22		0.42	0.56	0.66	0.75	0.83	0.90	0.97	1.03	1.09	1.16	1.21	1.26	1.31
	24		0.31	0.50	0.61	0.71	0.79	0.86	0.93	0.99	1.05	1.11	1.17	1.22	1.27
85	18		0.53	0.64	0.73	0.81	0.88	0.95	1.01	1.07	1.14	1.19	1.24	1.29	
	20		0.47	0.59	0.68	0.76	0.84	0.91	0.97	1.03	1.09	1.15	1.20	1.25	
	22		0.39	0.53	0.63	0.72	0.79	0.86	0.93	0.99	1.05	1.11	1.16	1.21	
	24		0.29	0.47	0.58	0.67	0.75	0.82	0.89	0.95	1.01	1.07	1.12	1.17	
80	18		0.50	0.61	0.70	0.77	0.84	0.91	0.97	1.03	1.09	1.14	1.19		
	20		0.44	0.56	0.65	0.73	0.80	0.87	0.93	0.99	1.05	1.10	1.15		
	22		0.37	0.50	0.60	0.68	0.76	0.82	0.89	0.95	1.01	1.06	1.11		
	24		0.27	0.45	0.55	0.64	0.71	0.78	0.85	0.91	0.97	1.02	1.07		
75	18		0.48	0.58	0.66	0.74	0.80	0.87	0.93	0.99	1.04	1.09			
	20		0.42	0.53	0.62	0.69	0.76	0.82	0.88	0.95	1.00	1.05			
	22		0.35	0.48	0.57	0.65	0.72	0.78	0.84	0.91	0.96	1.01			
	24		0.25	0.42	0.52	0.60	0.68	0.74	0.80	0.87	0.92	0.97			
70	18		0.45	0.55	0.63	0.70	0.76	0.82	0.89	0.94	0.99				
	20		0.39	0.50	0.58	0.65	0.72	0.78	0.85	0.90	0.95				
	22		0.32	0.45	0.54	0.61	0.68	0.74	0.80	0.86	0.91				
	24		0.24	0.39	0.49	0.57	0.64	0.70	0.76	0.82	0.87				
65	18		0.42	0.51	0.59	0.66	0.72	0.78	0.84	0.89					
	20		0.36	0.47	0.55	0.62	0.68	0.74	0.80	0.85					
	22		0.30	0.42	0.50	0.57	0.64	0.70	0.76	0.81					
	24		0.22	0.36	0.46	0.53	0.60	0.66	0.72	0.77					
60	18		0.39	0.48	0.55	0.62	0.68	0.74	0.79						
	20		0.34	0.43	0.51	0.58	0.64	0.70	0.75						
	22		0.28	0.39	0.47	0.54	0.60	0.66	0.71						
	24		0.20	0.33	0.42	0.49	0.56	0.62	0.67						
55	18		0.36	0.44	0.51	0.58	0.64	0.69							
	20		0.31	0.40	0.47	0.54	0.60	0.65							
	22		0.25	0.35	0.43	0.49	0.55	0.61							
	24		0.17	0.30	0.39	0.45	0.51	0.57							
50	18		0.33	0.41	0.47	0.53	0.59								
	20		0.28	0.36	0.43	0.49	0.55								
	22		0.22	0.32	0.39	0.45	0.51								
	24		0.15	0.27	0.35	0.41	0.47								
45	18		0.30	0.37	0.43	0.49									
	20		0.25	0.33	0.39	0.45									
	22		0.20	0.28	0.35	0.41									
	24		0.13	0.24	0.31	0.37									
40	18		0.26	0.33	0.39										
	20		0.22	0.29	0.35										
	22		0.17	0.25	0.31										
	24		0.11	0.20	0.27										
35	18		0.23	0.29											
	20		0.18	0.25											
	22		0.14	0.21											
	24		0.08	0.16											
30	18		0.19												
	20		0.14												
	22		0.10												
	24		0.06												

The indicated outputs with ΔT 50 and ΔT 60 are the exact outputs. ΔT 50 output measured in accordance with EN 442 and ΔT 60 output calculated according to EN 442. An average correction factor is given in this table for all other ΔT outputs, applicable for all dimensions.

KNOCKONWOOD WITH DBE CORRECTION FACTORS SOUND



Using DBE:
max. flow temperature 75°C
max. air humidity 95% R.H.

number of units	NOISE PRESSURE COMFORT dB(A)						MAX. MEASURED POWER (Watts)					
	1	2	3	4	5	6	1	2	3	4	5	6
DBEU.10	29.0	32.0	33.8	35.0	36.0	36.8	2.8	5.6	8.4	11.2	14	16.8
DBEU.15	27.0	30.0	31.8	33.0	34.0	34.8	2.2	4.4	6.6	8.8	11	13.2

NOISE PRESSURE 1 UNIT dB(A)		
Type	Comfort	Boost
DBEU.10	29	35
DBEU.15	27	31

Reverberation time RT60 0.6 s
reference room V₁ 80m³
Reference pressure P₀ 2.10⁻⁵Pa

SEVERAL APPLIANCES WITH AN EQUAL SOUND LEVEL IN A ROOM	
number [dB(A)]	Correction [dB(A)]
2	+ 3.0
3	+ 4.8

$P_2 = P_1 + 10 \log n$
P₁ = sound level one appliance
P₂ = sound pressure to be calculated
n = number of appliances

ROOM VOLUME	
Content m ³	Correction [dB(A)]
80	0
150	- 2.7
200	- 4.0
250	- 4.9
300	- 5.7
350	- 6.4
400	- 7.0
500	- 8.0
600	- 8.8

Calculation of sound pressure for other room content

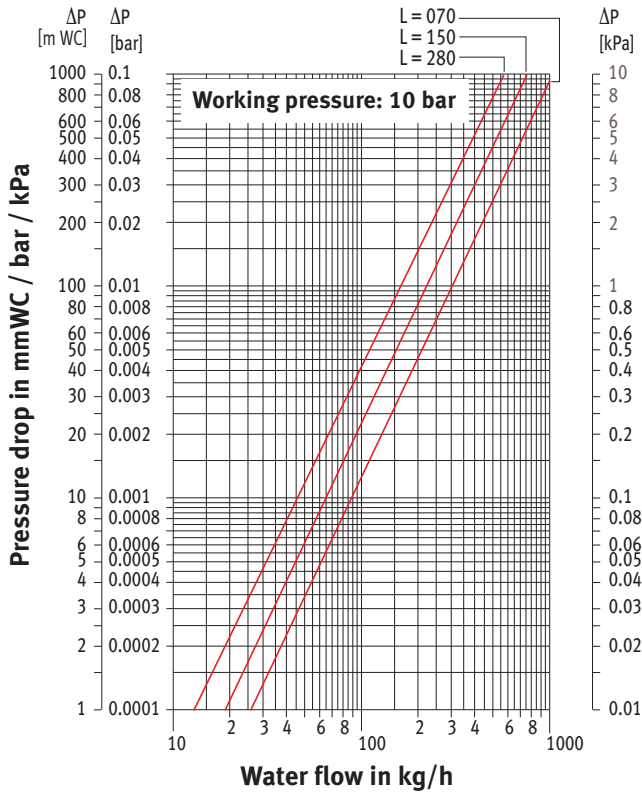
$$P_2 = P_1 - 10 \log \frac{V_2}{V_1}$$
P₁ = table of sound pressure
P₂ = sound pressure to be calculated
V₁ = size of reference room (80 m³)
V₂ = room size

REVERBERATION TIME	
Reverberation time (c) T ₂	Correction [dB(A)]
2.5	+ 6.2
2.0	+ 5.2
1.5	+ 4.0
1.0	+ 2.2

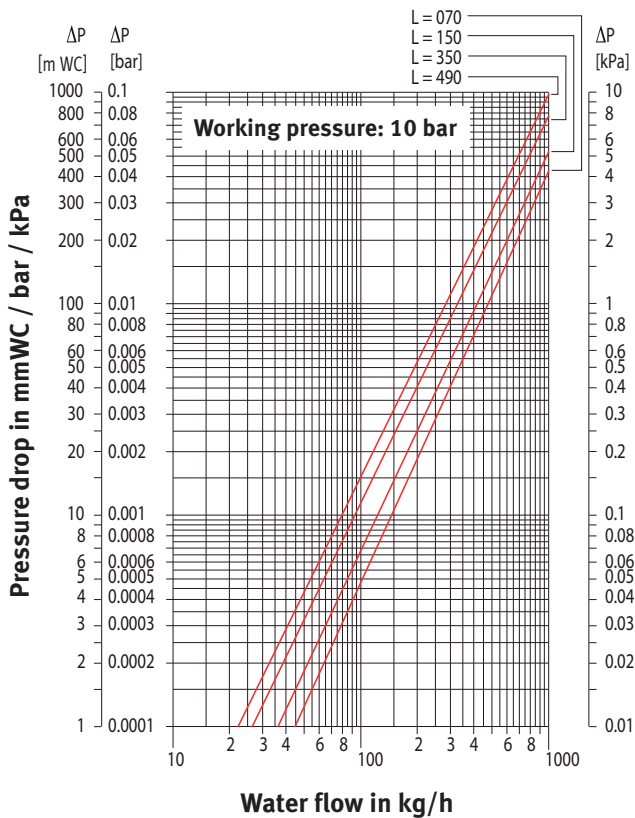
$$P_2 = P_1 - 10 \log \frac{T_2}{T_1}$$
P₁ = table of sound pressure
P₂ = sound pressure to be calculated
T₁ = reverberation time of room of reference (T₁ = 0.6 s)
T₂ = reverberation time of room

KNOCKONWOOD ■ PRESSURE DROP

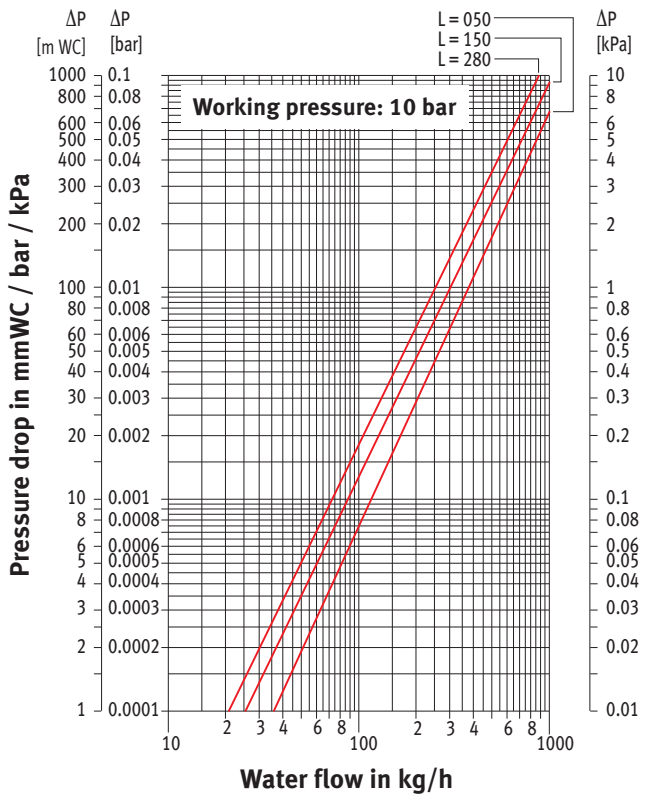
PRESSURE DROP TYPE 08



PRESSURE DROP TYPE 10

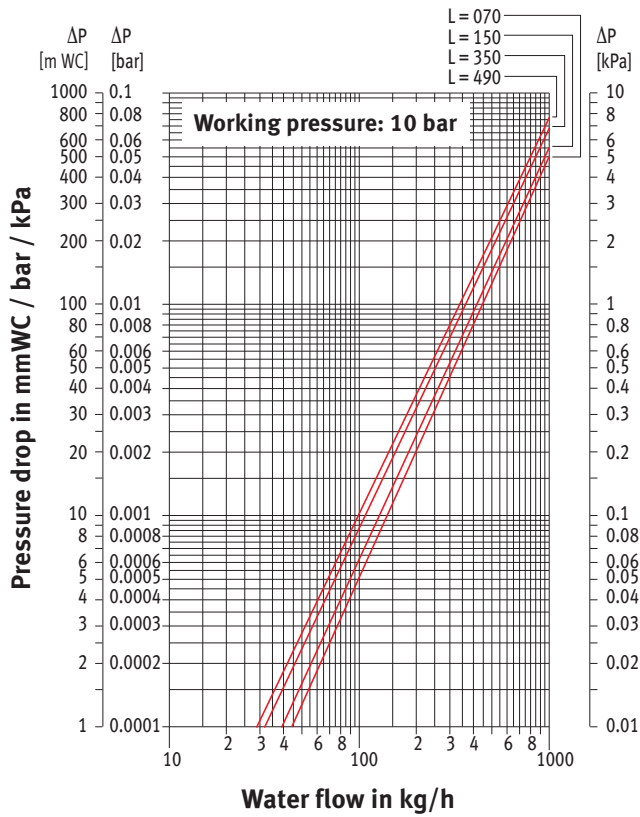


PRESSURE DROP TYPE 11

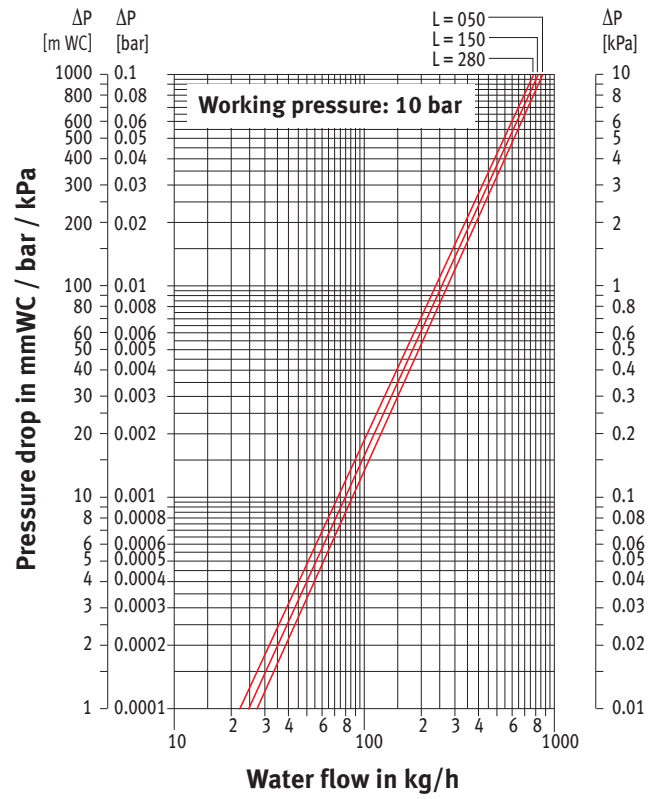


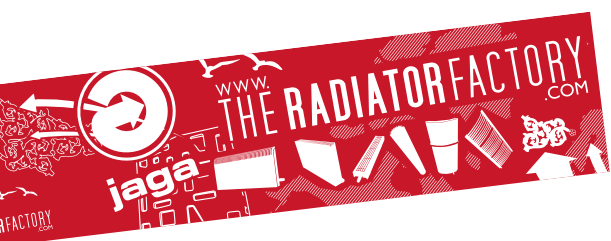
KNOCKONWOOD ■ PRESSURE DROP

PRESSURE DROP TYPE 15



PRESSURE DROP TYPE 16





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