

# Technical Info

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## Complete Correction Factor Tables

EN442 explained and correction factor tables for both natural and dynamic fan assisted systems

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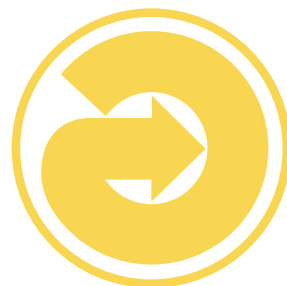
## Heat Exchangers Overview

For both opposite end connection and same end connection

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## Pressure Drop

For all types



**jaga**

# Complete Correction Factor Table

EN442



## Why the reference standard EN442?

This measuring standard puts an end to the large number of different values that have previously been used, and provides an accurate reference for comparing different systems.

The 75/65/20 system has been chosen for this reference value. This is a realistic starting point for choosing an appliance that provides sufficient heat with a low water temperature. On exceptionally cold days the water temperature may increase slightly, but for most of the heating season it will be much lower.

Of course many modern systems need to be able to work effectively at much lower water temperatures. Jaga's Low-H<sub>2</sub>O technology enables good output to be achieved even at low flow temperatures.

## For Natural Systems

Average correction factors according to EN442 - 75/65/20°C

T <sub>F</sub> ↓	T <sub>L</sub> ↓	T <sub>R</sub> ▶													
		20	25	30	35	40	45	50	55	60	65	70	75	80	85
90	20	0.62	0.68	0.74	0.80	0.87	0.93	1.00	1.07	1.14	1.21	1.28	1.36	1.43	1.50
	24	0.52	0.58	0.64	0.70	0.76	0.83	0.89	0.96	1.03	1.10	1.17	1.24	1.31	1.38
85	20	0.56	0.62	0.68	0.74	0.80	0.87	0.93	1.00	1.07	1.14	1.21	1.28	1.36	
	24	0.47	0.52	0.58	0.64	0.70	0.76	0.83	0.89	0.96	1.03	1.10	1.17	1.24	
80	20	0.50	0.56	0.62	0.68	0.74	0.80	0.87	0.93	1.00	1.07	1.14	1.21		
	24	0.41	0.47	0.52	0.58	0.64	0.70	0.76	0.83	0.89	0.96	1.03	1.10		
75	20	0.44	0.50	0.56	0.62	0.68	0.74	0.80	0.87	0.93	1.00	1.07			
	24	0.36	0.41	0.47	0.52	0.58	0.64	0.70	0.76	0.83	0.89	0.96			
70	20	0.39	0.44	0.50	0.56	0.62	0.68	0.74	0.80	0.87	0.93				
	24	0.31	0.36	0.41	0.47	0.52	0.58	0.64	0.70	0.76	0.83				
65	20	0.34	0.39	0.44	0.50	0.56	0.62	0.68	0.74	0.80					
	24	0.26	0.31	0.36	0.41	0.47	0.52	0.58	0.64	0.70					
60	20	0.29	0.34	0.39	0.44	0.50	0.56	0.62	0.68						
	24	0.21	0.26	0.31	0.36	0.41	0.47	0.52	0.58						
55	20	0.24	0.29	0.34	0.39	0.44	0.50	0.56							
	24	0.17	0.21	0.26	0.31	0.36	0.41	0.47							
50	20	0.19	0.24	0.29	0.34	0.39	0.44								
	24	0.13	0.17	0.21	0.26	0.31	0.36								
45	20	0.15	0.19	0.24	0.29	0.34									
	24	0.09	0.13	0.17	0.21	0.26									
40	20	0.11	0.15	0.19	0.24										
	24	0.06	0.09	0.13	0.17										
35	22	0.05	0.08	0.12											
	24	0.03	0.06	0.09											
30	20	0.04	0.08												
	24	0.00	0.03												



**KEY**  
 T<sub>F</sub> = Flow temperature °C  
 T<sub>R</sub> = Return temperature °C  
 T<sub>L</sub> = Desired air temperature °C

The indicated outputs ΔT 50 °C are the exact outputs and are calculated in accordance with EN 442. An average correction factor is given in this table for outputs at other ΔT and is applicable for all dimensions.

### Example

Use the table to determine the relevant correction factor with a water temperature of 70/60°C with a room temperature of 20°C.

The correction factor = 0.87

Required output 1000 watts: 1000 divided by 0.87 = 1149 watts therefore search in this literature's standard output tables for a Jaga natural trench or perimeter heating product with an output of at least 1149 watts.



# Complete Correction Factor Table

For Dynamic Fan Assisted Systems

Average correction factors according to 75/65/20°C for comfort and boost mode

TF ▼	TL ▼	TR ▶													
		20	25	30	35	40	45	50	55	60	65	70	75	80	85
90	20	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05	1.10	1.15	1.20	1.25	1.30	1.35
	24	0.62	0.67	0.72	0.77	0.82	0.87	0.92	0.97	1.02	1.07	1.12	1.17	1.22	1.32
85	20	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05	1.10	1.15	1.20	1.25	
	24	0.57	0.62	0.67	0.72	0.77	0.82	0.87	0.92	0.97	1.02	1.07	1.12	1.17	
80	20	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05	1.10	1.15		
	24	0.52	0.57	0.62	0.67	0.72	0.77	0.82	0.87	0.92	0.97	1.02	1.07		
75	20	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05			
	24	0.47	0.52	0.57	0.62	0.67	0.72	0.77	0.82	0.87	0.92	0.95			
70	20	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95				
	24	0.42	0.47	0.52	0.57	0.62	0.67	0.72	0.77	0.82	0.87				
65	20	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85					
	24	0.37	0.42	0.47	0.52	0.57	0.62	0.67	0.72	0.77					
60	20	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75						
	24	0.32	0.37	0.42	0.47	0.52	0.57	0.62	0.67						
55	20	0.35	0.40	0.45	0.50	0.55	0.60	0.65							
	24	0.27	0.32	0.37	0.42	0.47	0.52	0.57							
50	20	0.30	0.35	0.40	0.45	0.50	0.55								
	24	0.22	0.27	0.32	0.37	0.42	0.47								
45	20	0.25	0.30	0.35	0.40	0.45									
	24	0.17	0.22	0.27	0.32	0.37									
40	20	0.20	0.25	0.30	0.35										
	24	0.12	0.17	0.22	0.27										
35	20	0.15	0.20	0.25											
	24	0.07	0.12	0.17											
30	20	0.10	0.15												
	24	0.02	0.07												



**KEY**  
 TF = Flow temperature °C  
 TR = Return temperature °C  
 TL = Desired air temperature °C

The indicated outputs  $\Delta T$  50 °C are the exact outputs and are calculated in accordance with EN 442.  
 An average correction factor is given in this table for outputs at other  $\Delta T$  and is applicable for all dimensions.

### Example

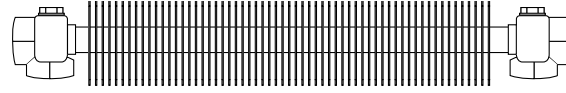
Use the table to determine the relevant correction factor with a water temperature of 50/40°C with a room temperature of 20°C.

The correction factor = 0.5

Required output 1000 watts: 1000 divided by 0.5 = 2000 watts therefore search in this literature's standard output tables for a Jaga natural trench or perimeter heating product with an output of at least 2000 watts.

# Heat Exchangers Overview

## Opposite End Connection

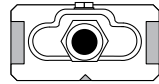


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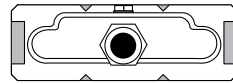
Type 4  
opposite end connection

100



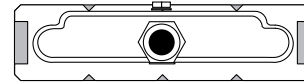
Type 9  
opposite end connection

150



Type 14  
opposite end connection

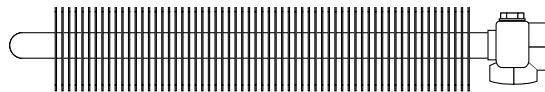
200



Type 19  
opposite end connection

50

## Same End Connection



50



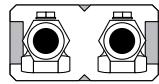
Type 5

80



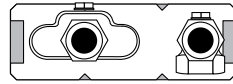
Type 7

100



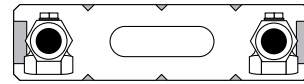
Type 9

150



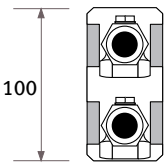
Type 14

200

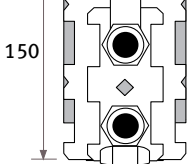


Type 19

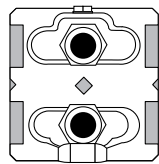
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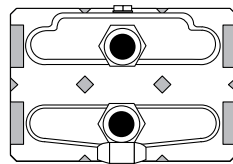
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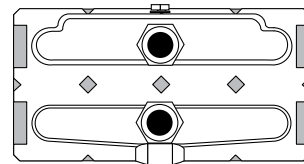
150



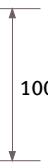
Type 10



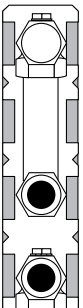
Type 15



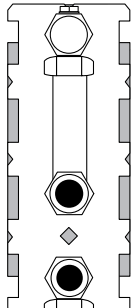
Type 20



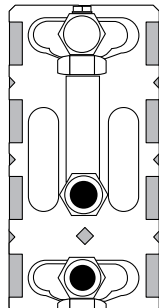
100



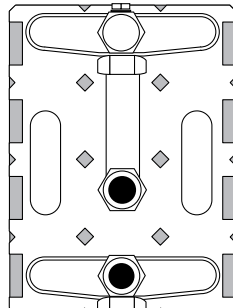
Type 6



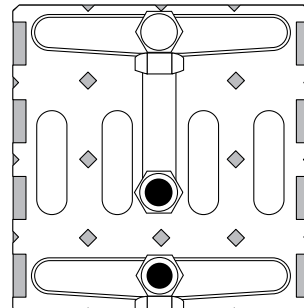
Type 8



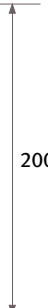
Type 11



Type 16



Type 21



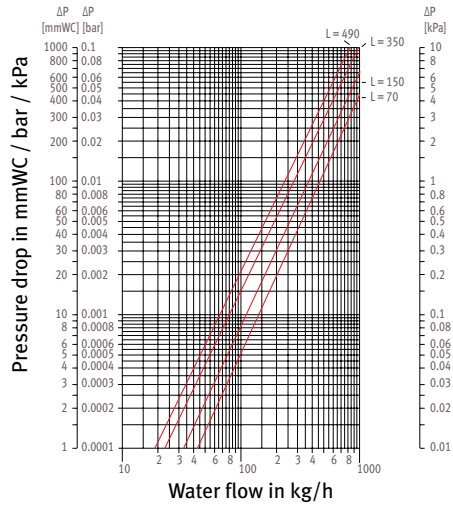
200

Lengths from 400mm to 3000mm - different lengths available on request

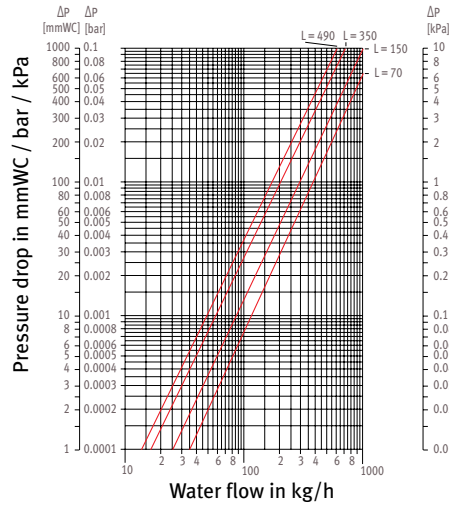
For water content details for the above heat exchangers, please contact Jaga's technical department on 01531 631 533.

# Pressure Drop

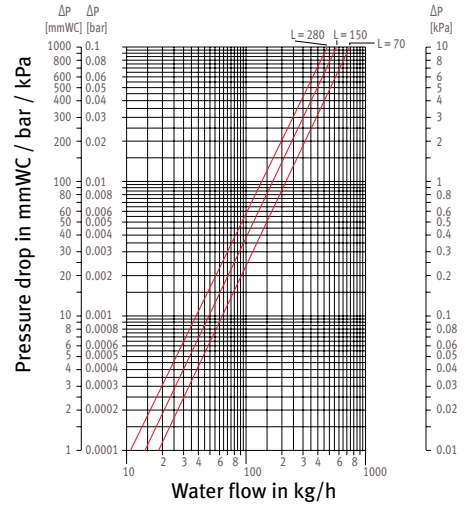
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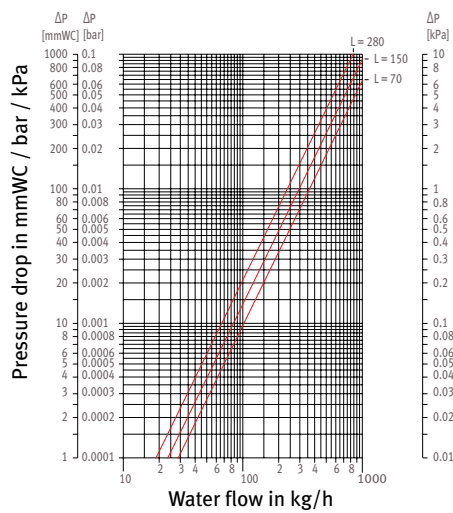
## Type 5



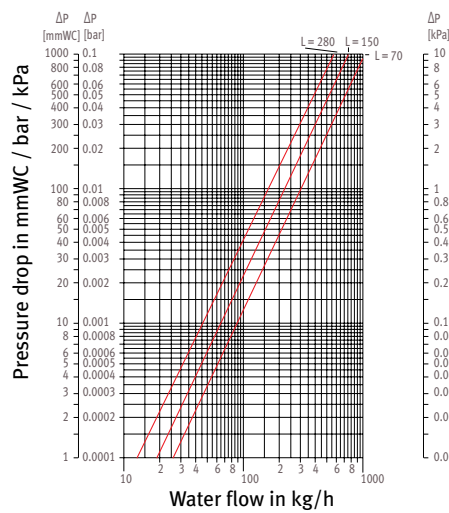
## Type 6



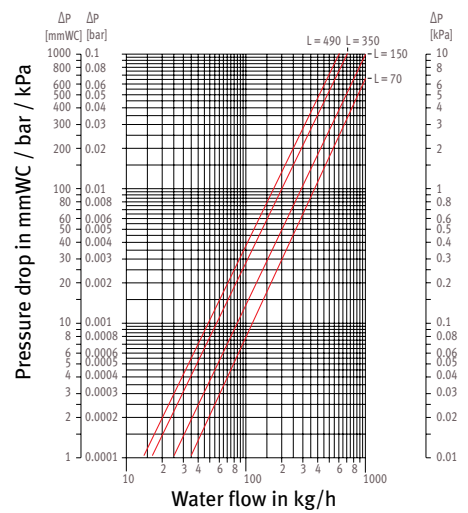
## Type 7



## Type 8

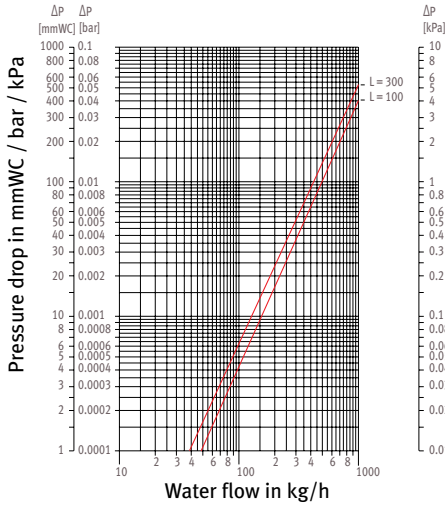


## Type 9

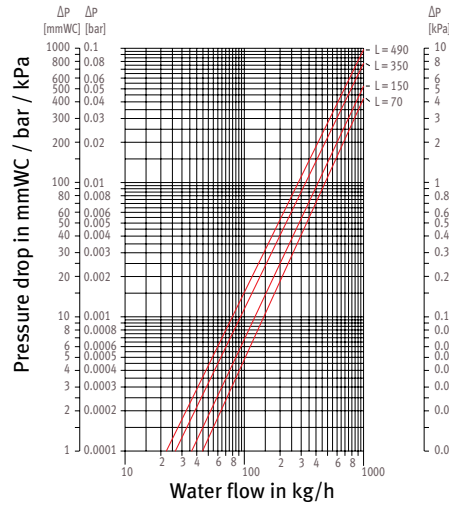


# Pressure Drop

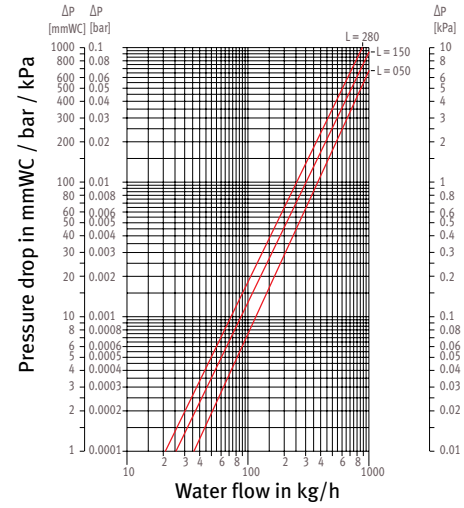
## Type 9 - Opposite End Connection



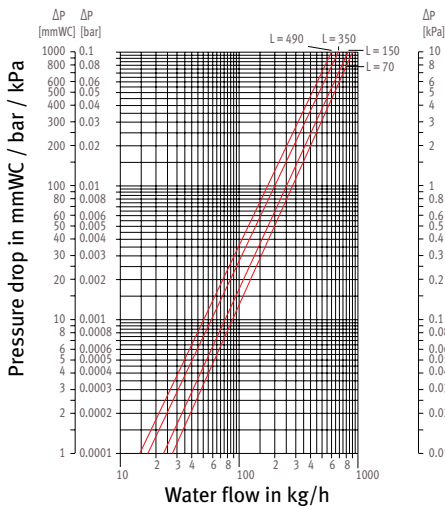
## Type 10



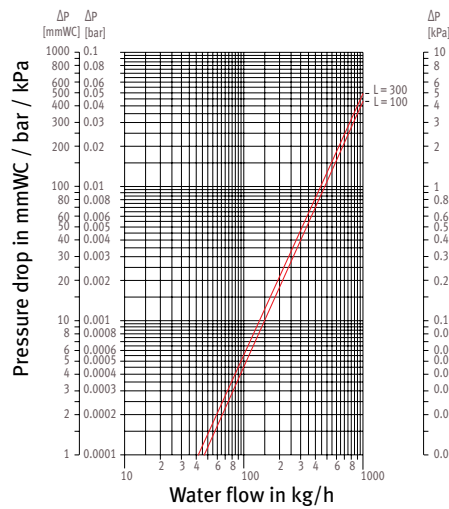
## Type 11



## Type 14



## Type 14 - Opposite End Connection



## Type 15

