

versatile



CLIMA CANAL 10



CLIMA CANAL 10

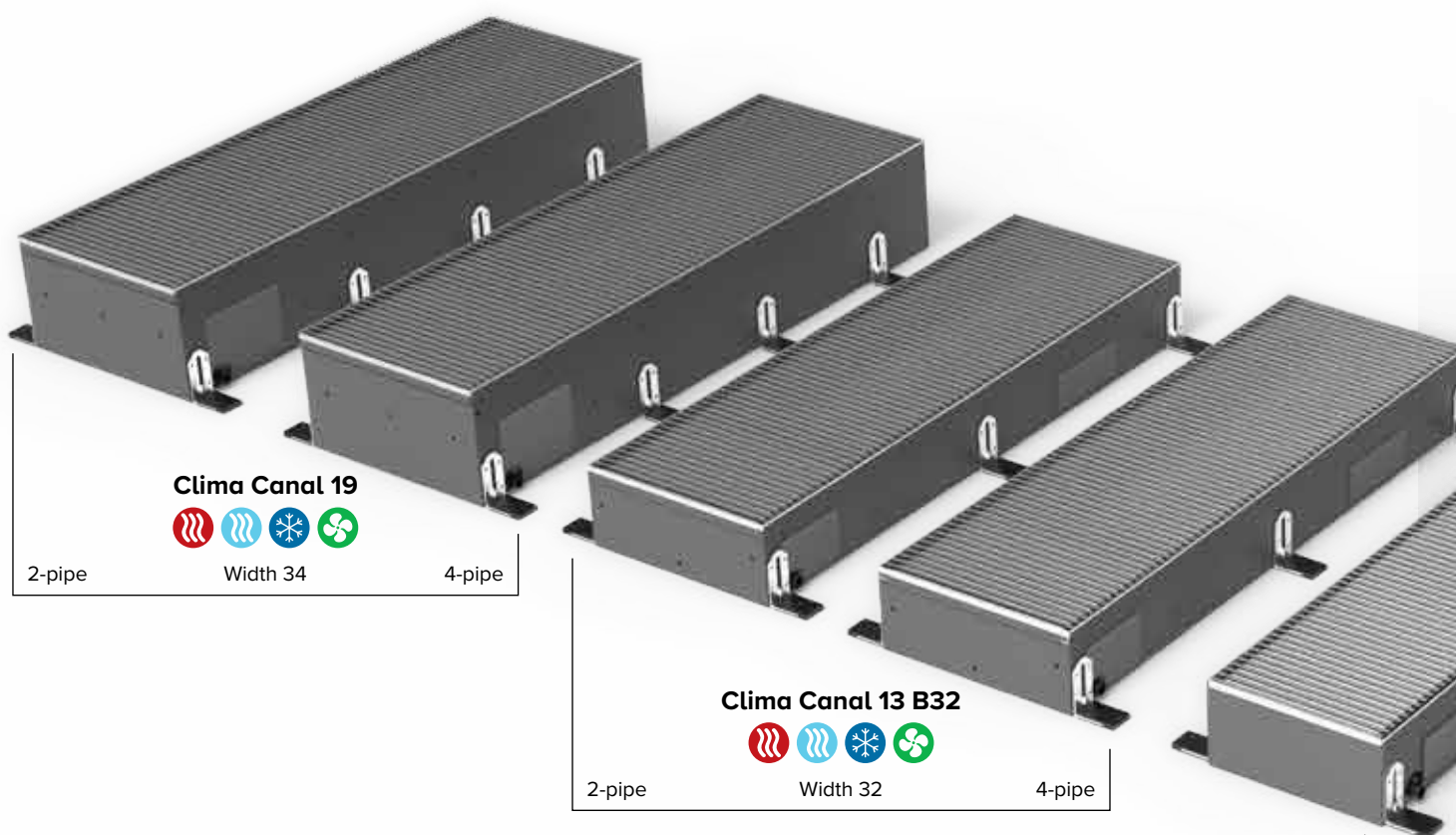
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COMPLETE CLIMATE CONTROL, POWERFUL AND DISCREET

The Jaga floor convector heaters offer the ideal climate solution, they provide comfortable heating and cooling at a very low noise level without hindering your outside view. An additional advantage is the optimal distribution of hot (or cool) air throughout the area.

Jaga Clima Canals provide answer to cold trap in large glass areas. The downward cold airflow at glass walls often creates an uncomfortable comfort feeling Clima Canals create a warm air curtain. The cold air layer of the window is drawn against the floor, warmed and mixed with the warmer upper air, achieving a balanced and even comfort temperature. This is done extremely efficiently due to the placement of the heat exchanger on the window side of the well. Jaga Clima Canals provide answer to cold traps at large glazed areas. The downward cold air flow at glass walls often creates an uncomfortable comfort feeling Clima Canals create a warm air curtain. In heating mode, the cold air layer of the window is drawn against the floor, warmed and mixed with the warmer upper air. In cooling mode, the warmer upper air is pressed against the floor inside the room and re-circulated across the floor to the window section, and cooled by the heat exchanger, achieving a balanced and even comfort temperature throughout the room. This is done extremely efficiently due to the placement of the heat exchanger on the window side of the well.

Clima Canal is more than just heating. The units can be equipped with a ventilation connection to provide a completely invisible, comfortable and preheated fresh air supply. Combined with a heat pump, the Clima Canal is also a powerful cooler.



SOPHISTICATED DESIGN

Clima Canals offer powerful climate technology from minimal installation depths. After finishing, only the grille remains visible, which can be adapted to the interior flawlessly thanks to the wide variety of colour options and materials available. With all the internal components coated dark grey, the entire interior is designed to be invisible.

For safety and performance purposes, floor convectors must not be covered by furniture or window coverings. Therefore, the space between the unit and the window should be considered when fitting curtains and blinds to ensure they do not touch the unit. For optimal comfort, the floor duct is preferably the same length as the window.

QUALITY WITHOUT CONCESSIONS

The use of high-quality materials, such as copper and aluminium for the heat exchanger and electro-galvanised steel for the duct, provides a perfect rustproof end product, with all its components carefully coated with a UV-resistant polyester paint of the highest quality. The specially selected EC motor operates in a sealed dust-free environment with a balanced and vibration-free movement.

Clima Canal 13 B27

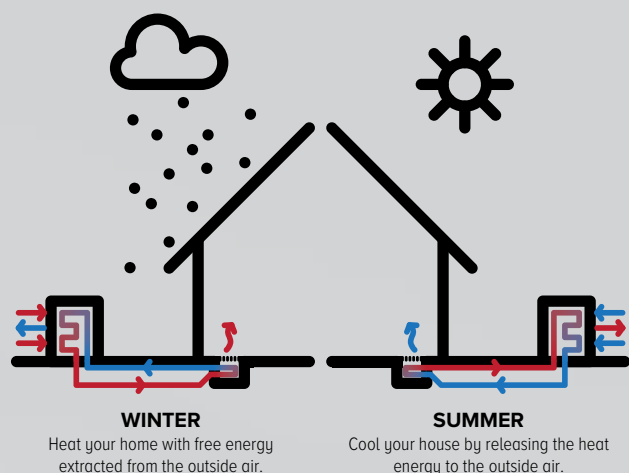


HEATING AND COOLING WITH HEAT PUMP

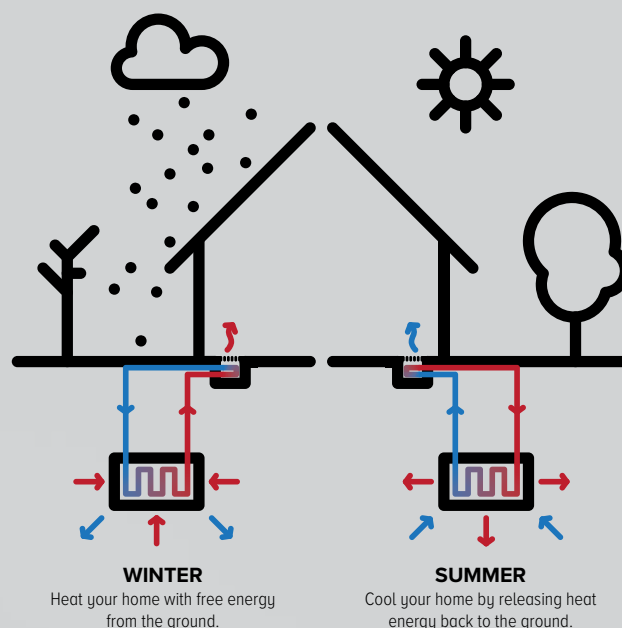
With its low water content and high thermal conductivity coefficient for low supply temperatures, the Clima Canal is the ideal match for your heat pump and it allows the units to react extremely efficiently to your heating or cooling demands, even at low supply temperatures.

Depending on your cooling needs, you can opt for Light or Deep Cooling. Clima Canal 08 is ideal for Light Cooling (non-condensing cooling). Clima Canal 10, 13 and 19 are supplied with a condensation drain and are therefore suitable for Deep Cooling (condensing cooling).

WITH AIR-TO-WATER HEAT PUMP



WITH GEOTHERMAL HEAT PUMP



Clima Canal 10 Plug & Play



Width 18
2-pipe

Clima Canal 10



Width 18
2-pipe

Clima Canal 08



Width 18
2-pipe

- Condensing cooling
- Non-condensing cooling
- Ventilation (option)
- Heating

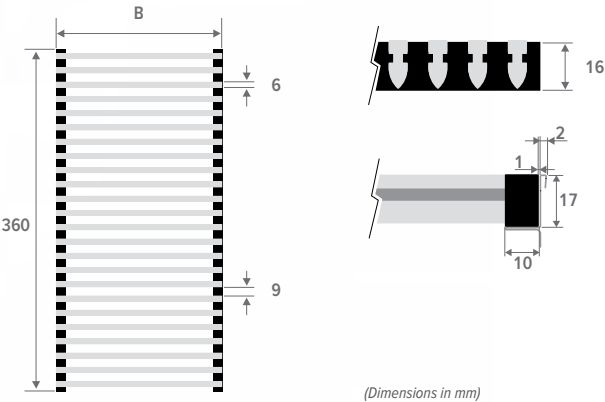


ALUMINIUM GRILLES

Aluminium panel grille with aerodynamically shaped transverse profiles in black vibration-free EPDM, grille supports EPDM rubber hardness 85.

PROPERTIES

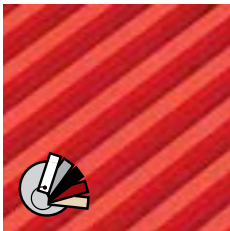
- provided as standard to enable continuous installation
- sound-insulating EPDM rubber supports
- developed for easy maintenance of the units / the aluminium profiles are low maintenance
- eco-friendly, scratch-resistant powder coating with high UV-resistance



ALUMINIUM NATURAL COLOUR ANODISED GRILLES



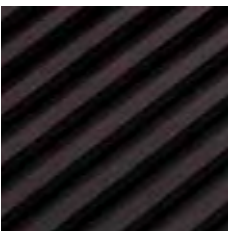
BNA Alu. natural



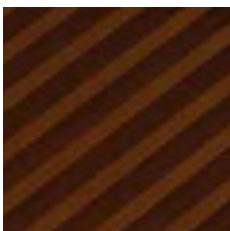
BNC/XXX Alu. coated

 Our grilles are available in all colours, with the exception of Sand blast grey 001. In case of intensive use (installation in circulation areas, for example in front of sliding windows and doors), wear is evidently inevitable.

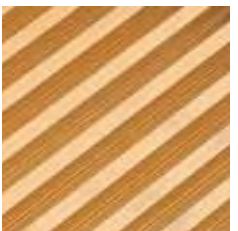
COLOURED ANODISED ALUMINIUM GRILLES



BAN/AN1 Black



BAN/AN2 Dark brown



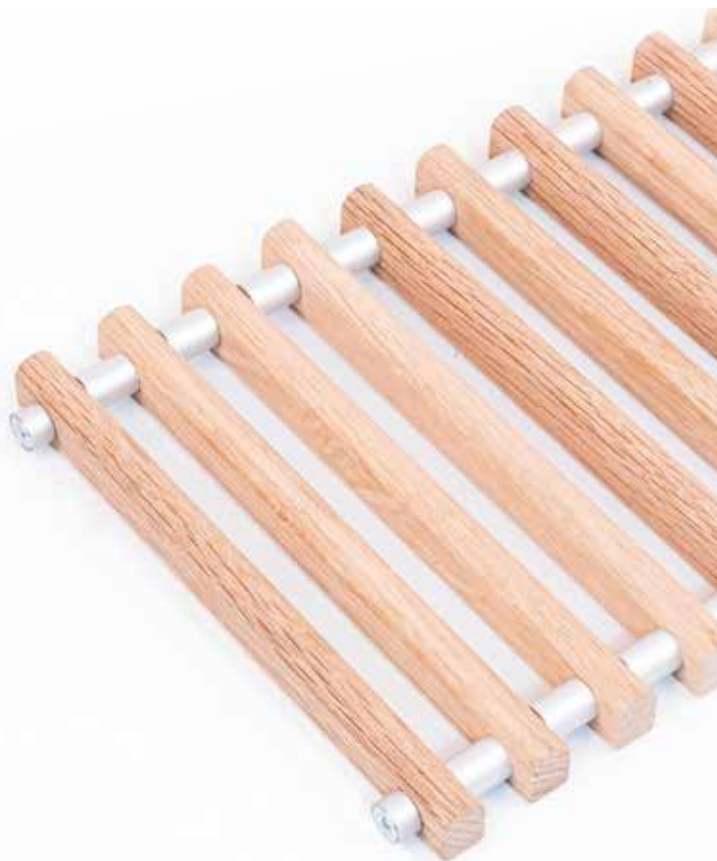
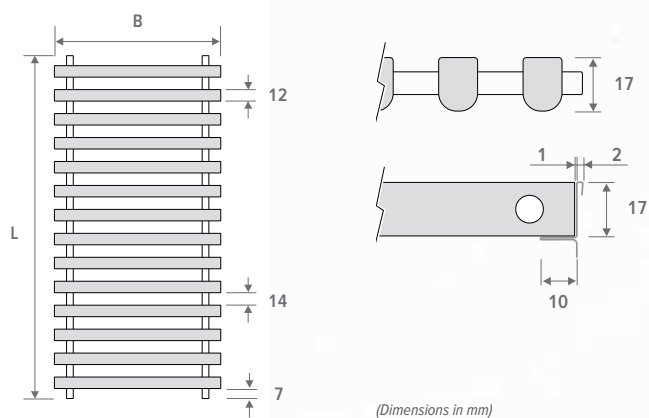
BAN/AN3 Brass-coloured

WOODEN ROLL-UP GRILLES

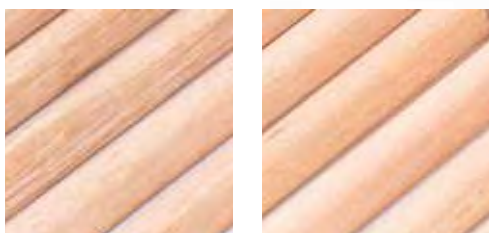
Wooden grille with aerodynamically shaped transverse profiles, connected with a galvanised spring. Aluminium inserts are used to ensure the correct clearance.

PROPERTIES

- provided as standard to enable continuous installation
- natural colour (untreated), allowing the customer to finish the grille to match the floor



NATURAL WOODEN GRILLES



BON Oak natural **BBN** Beech natural

VARNISHED WOODEN GRILLES



BOV Oak varnished **BBV** Beech varnished

versatile

CLIMA CANAL 10





HEIGHT-ADJUSTABLE BASE 0 > 4.5 cm provided with acoustic decoupling

HEIGHT ADJUSTMENT SCREW

PROTECTION PANEL panel for mounting and site protection

GRILLE aluminium and wooden grilles in a variety of colours and materials



alu. natural
grille

coated alu
grille

coloured
anodised alu
grille

natural wooden
grille

varnished
wooden grille

DYNAMIC HEAT EXCHANGER

EC FANS

VALVES COVER PLATE

FINE ADJUSTMENT
to max. +0.8 cm, for a perfect
alignment with the finished floor

**ELECTRICAL CONNECTION
ON THE INSIDE**

**STAINLESS STEEL FLEXIBLE
CONNECTIONS 1/2"**, 15 cm long
stainless steel flexible hoses allow
the internal mechanism to be removed
completely for easy cleaning

HYDRONIC & ELECTRICAL CONNECTION
always left-hand side

CONDENSATE TRAY, for drainage (ø 2 cm) of condensate water

DUCT WITH STAINLESS STEEL GRILLE SUPPORT, coated housing in sendzimir galvanised steel plate

OPTIONAL
nozzle(s) for ventilation duct

ORDER CODE CLIMA CANAL 10

CLCu

010

072

18

XXX

F

A

D05

VV

Option: air outlet vent

Control:

- Jaga BMS 0-10V control: D03

- Jaga 3 settings controller: D05

- Jaga On/off: D07

Height adjustment:

- Adjustable 0 - 4,5 cm: A

- Adjustable 4,5 - 10 cm: B

Stainless steel flexible connections

Grille

Width

Length

Height

Version

STANDARD DELIVERY:

- casing in Sendzimir-galvanised steel sheet (RAL7024) with height adjustment and stainless steel grille support
- grille(s): anodised aluminium or wood
- dynamic heat exchanger
- thermal activator(s), (tangential mini activator) 24 VDC
- stainless steel flexible connections 1/2", 15 cm long
- provided as standard to enable continuous installation
- height-adjustable base 0 < 4.5 cm
- fine adjustment 0 > 0.8 cm
- cover plate

VERSION

Trench-heating: CLCM



Empty housing: CLCD



HEIGHT

010 cm

LENGTH

072 cm / 108 cm / 144 cm / 180 cm

WIDTH

18 cm

GRILLE

BNA	BON	BBN
BNC/XXX	BOV	BBV
BAN/AN1	BAN/AN2	BAN/AN3

GRILLE: COLOUR

Our grilles and frames are available in all colours, with the exception of Sandblast grey 001. In case of intensive use (placement in circulation areas, for example in front of sliding windows and doors), wear is, of course, inevitable.

STAINLESS STEEL FLEXIBLE CONNECTIONS



HEIGHT ADJUSTMENT



- A height adjustment 0 - 4,5 cm
- B height adjustment 4 - 10 cm

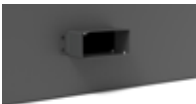
CONTROL SYSTEMS

JDPC (Jaga Dynamic Product Controller)

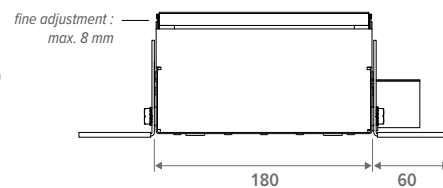
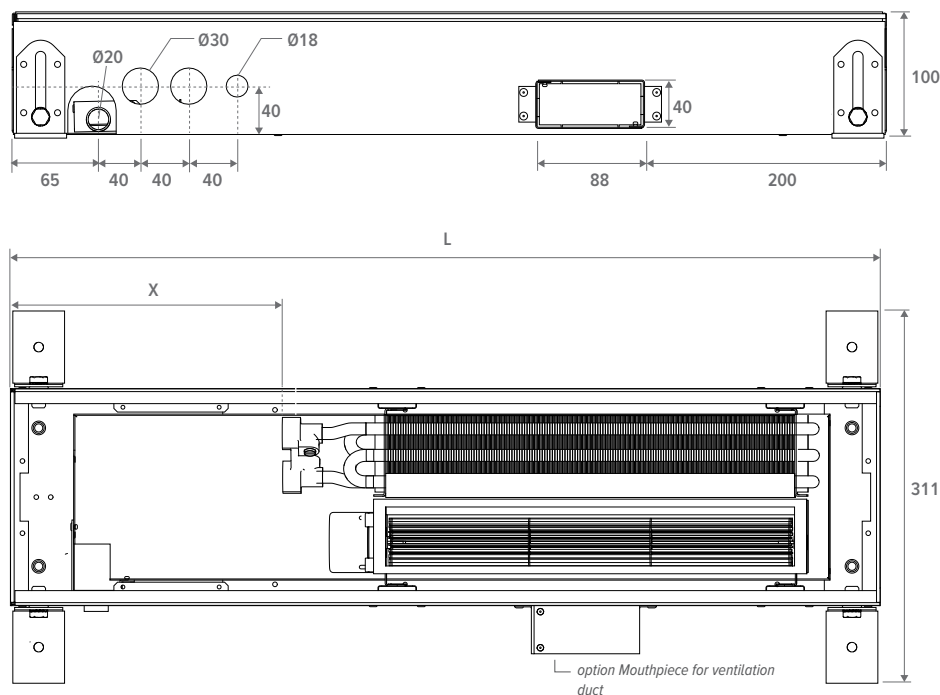


OPTIE

AIR OUTLET VENT



DIMENSIONS (in mm)



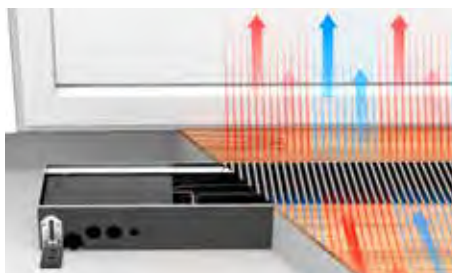
L mm	X mm
723	230
1083	230
1443	185
1803	150

⚠ Installation opening: +5 mm

INSTALLATION

- For the distance between the duct and the window, any wall-mounted cornices must be taken into account. Curtains can never be suspended over the duct. The heating element needs to be accessible for maintenance at all times.
- Curtains to the floor: Place the unit at least 20 cm from the window.
- If the unit is not mounted directly onto the even floor, the space between the underside of the unit and the floor needs to be filled with a stable type of filling, such as in-situ concrete.
- Always install with the heat exchangers facing the window or the wall
- Connections always on the left

Operating principle



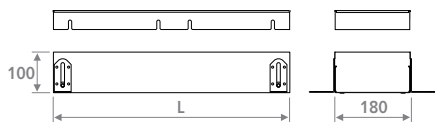
Stainless steel flexible hoses allow the internal mechanism to be removed completely for easy cleaning



Through-mounting

All Clima Canal are prepared for continuous installation. Visually from the outside, there is only one nice lined-up Clima Canal, but under the floor each Clima Canal has its own connection.

EMPTY HOUSING



- to fill open spaces for a continuous installation
- aluminium or wooden grille
- duct with stainless steel grille support
- height adjustment 10 > 14 cm
- height control with fine adjustment to align with the finished floor
- protection panel

CODE	L cm
CLCD 010 072 18 XXX	072
CLCD 010 108 18 XXX	108
CLCD 010 144 18 XXX	144
CLCD 010 180 18 XXX	180

fill in grille code

CORNER PIECE



- aluminium grille natural or coated
- duct with stainless steel grille support
- height adjustment: 10 > 14 cm
- height control with fine adjustment to align with the finished floor

CODE	
CLCD 010 025 18 BNA	Alu. natural
CLCD 010 025 18 BNC XXX	Alu. coated

enter colour code

MOUTHPIECE FOR VENTILATION DUCT

Metal mouthpiece



- connection for pretreated air
- height 4 cm x length 9 cm
- made from galvanised steel plate

CODE

CLCD 010 LLL 18 XXX F DDD V1 4 x 9 cm

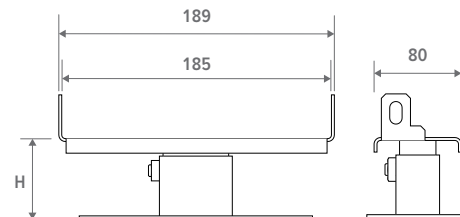
enter control system code
fill in grille code
fill out length

Max. number of connection adapters per length

LENGTH

072	1 connection adapter
108	2 connection adapters
144	3 connection adapters
180	4 connection adapters

HEIGHT-ADJUSTABLE BASE FOR SYSTEM FLOORS



- painted in dark grey RAL 7024
- easy installation by means of screws
- 1 set includes 2 height adjusting controls

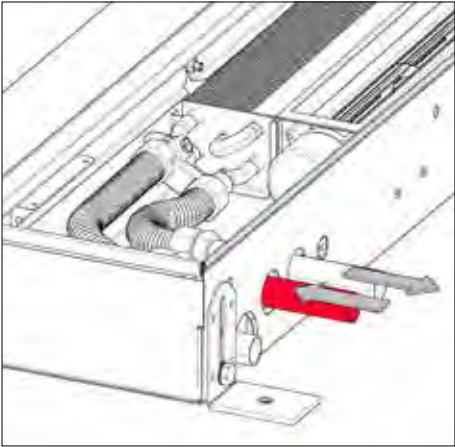
Number of sets per Clima Canal length

L 072 = 1 set
L 120 = 1 set
L 150 = 2 sets
L 180 = 2 sets

CODE	H cm
5209 0507 0000	5 / 7
5209 0813 0000	8 / 13
5209 1323 0000	13 / 23
5209 2030 0000	20 / 30

HYDRONIC CONNECTION

- the heat exchangers with same end connection are always connected on the left side of a two-pipe installation
- always install with the heat exchangers facing the window or the wall



CONNECTION POSSIBILITIES

Connection set with Jaga two-way valve 24 VDC 1/2" default setting in 6 steps



set 297	KVS 0.8 - default setting in 6 steps	
CODY JA4 24 4...	24 VDC	
CODY JA4 10 4...	0..10 VDC	

Connection set with Jaga two-way valve 24 VDC 1/2" without default setting



set 298	KVS 1.0 - without default setting	
CODY WA4 24 4...	24 VDC	
CODY WA4 10 4...	0..10 VDC	

Connection set with 2 lockshield valves G1/2"



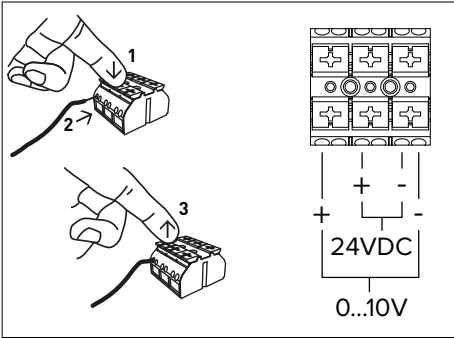
set 299	KVS 1.2 - Kv max. 0.6	
CODY LOM 00 4...	fill in sleeve coupling code	

Sleeve couplings 3/4" Eurocone

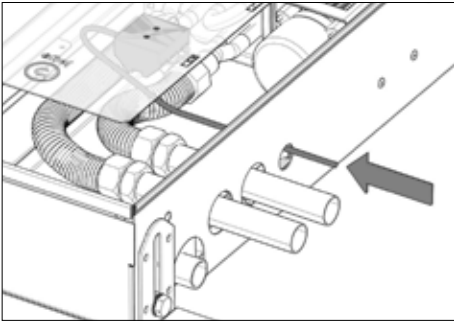
PRECISION METAL TUBE		SYNTHETIC OR RPE/ALU	
CODE	Tube Ø	CODE	Tube Ø
112	12/1	612	12/2
114	14/1	614	14/2
115	15/1	616	16/2
116	16/1	618	18/2
118	18/1	619	16/1.5
		620	20/2

ELECTRICAL CONNECTION

- clamp connector for 24 VDC electrical connection on the left, to be connected via external power supply.
- controlling fan speed with 0-10 V signal
- the warranty only applies when original Jaga power supplies were used



On the side of the hydronic connection, you can also find the terminal block for the electrical connection. The electrical connection is connected to the black block at the base of the protective cover.



POWER SUPPLIES

! Jaga units are only CE: EN-60335 certified with use of the original Jaga power supplies

Waterproof power supply 24 VDC with waterproof cable gland

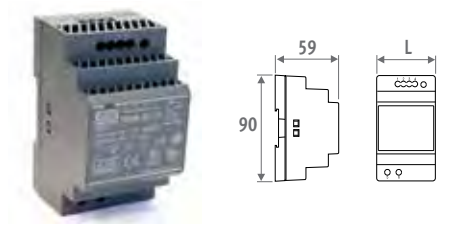


! Not suitable for in-floor duct installation.

- with waterproof swivel nut connector
- in compliance with UL1310 - EN 60950-1 / Class II
- output voltage 24 VDC
- input voltage 100 - 240 VAC
- output current 1.67 A
- output 40 Watts
- dimensions L 14.5 x B 4.5 x H 3.0 cm

CODE	OUTPUT Watts	OUTPUT CURRENT A
37603 010002	40	1.67

Power supply DIN-rail assembly



- for DIN-rail or wall mounting in a electrical switchboard
- in compliance with UL60950 / UL508 / EN 60950-1 / TUV EN61558-2-16 / Class II
- output voltage 24 VDC
- input voltage 100 - 240 VAC
- screw connection
- LED indicator

CODE	L mm	OUTPUT Watts	OUTPUT CURRENT A
7990 054	3.5	36	1.50
7990 055	5.3	60	2.50
7990 056	7.0	92	3.90
7990 057	10.3	150	6.25

JDPC (JAGA DYNAMIC PRODUCT CONTROLLER)



Control panel

CODE	POSITION	CONTROL PANEL	EXTERNAL 0-10 V CONTROL	WATER TEMPERATURE SENSOR	AIR TEMPERATURE SENSOR
Jaga BMS 0-10V control (D03)	  	-	-	✓	-
Jaga 3 settings controller (D05)	  	✓	-	✓	-
Jaga On/off (D07)	  	-	-	✓	-

JAGA BMS 0-10V CONTROL (D03)

- Upon request for cold or heat, a BMS/home automation system or a JAGA thermostat will open the thermoelectric valve.
- When heat or cold is requested, a BMS/home automation system or JAGA thermostat will transmit a 0-10V signal.
- When the fan recognises cold (<18°C) or hot (>28°C) water, it will rotate proportionally of the 0-10V signal

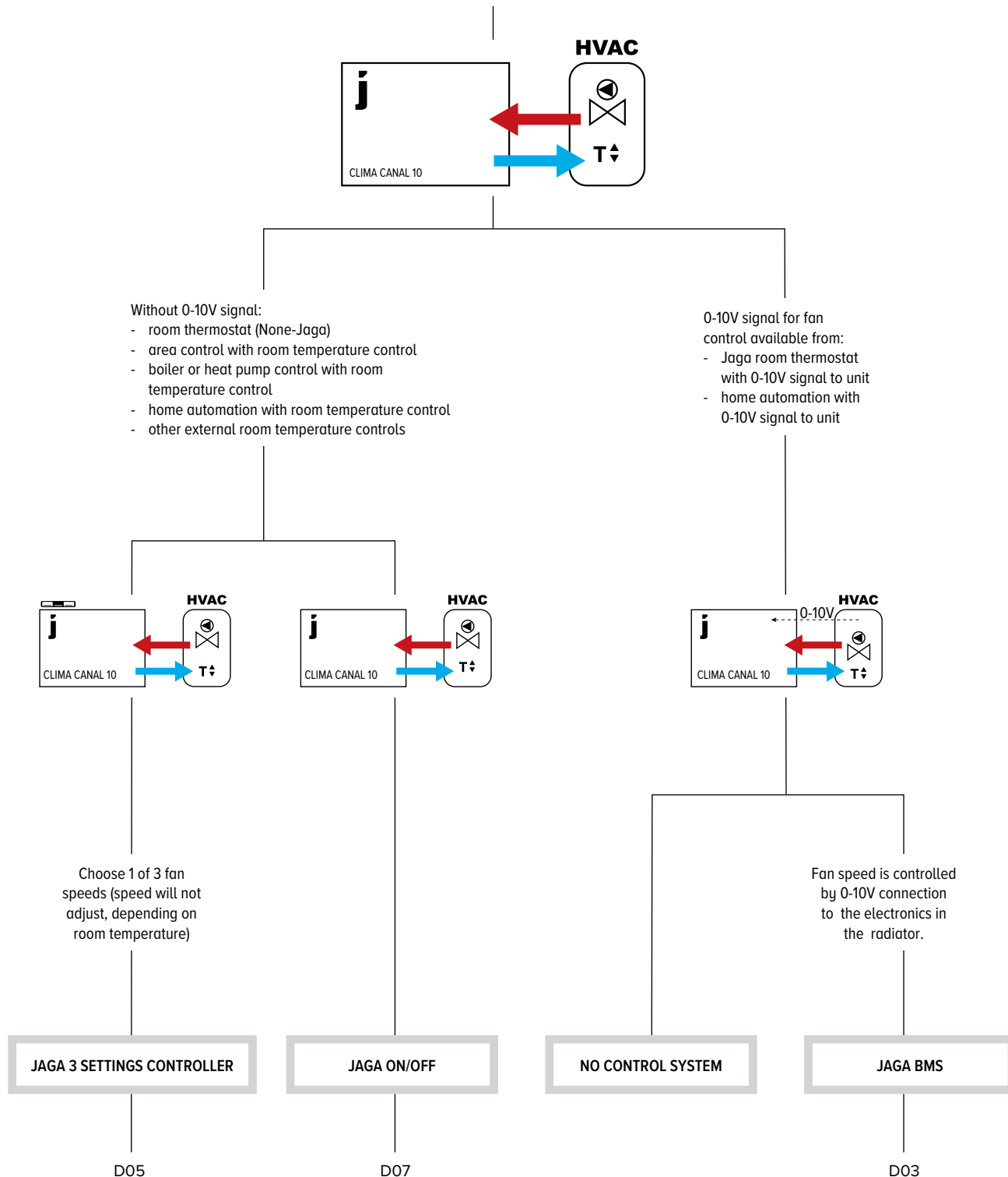
JAGA 3 SETTINGS CONTROLLER (D05)

- When heat or cold is requested, an external signal (thermostat, BMS/home automation, ...) a thermal engine.
- Heating: The fan will rotate at a fixed speed once the water has reached the setting of 28°C.
- Cooling: he fan will rotate at a fixed speed once the water has reached the setting of 18°C.
- The user manually selects the desired mode via the control panel  /  /  / OFF. The unit can run at 3 speeds. The unit starts at the last selected speed(1, 2 or 3) when the preset water temperature is reached.

JAGA ON/OFF (D07)

- When heat or cold are requested, a BMS/home automation system will open up the thermoelectric valve.
- Heating: The fan will rotate at a fixed speed once the water has reached the setting of 28°C.
- Cooling: he fan will rotate at a fixed speed once the water has reached the setting of 18°C.

0-10V control signal for fan speed present in HVAC control?
Fans start when a 0-10V signal is sent to the fan. If a JDPC is added to the Clima Canal, the water temperature will be taken into account.



Coding:

D05

D07

D03

**Noise measurement according to ISO 3741:2010, at a 2-m distance from the unit and with an assumed room attenuation of 8 dB(A)/room volume 100 m³ / reverberation time 0.5 sec.*

code height adjustment:
Adjustable 0 - 4,5 cm: A
Adjustable 4,5 - 10 cm: B

enter control system code
Jaga BMS 0-10V control: D03
Jaga 3 settings controller: D05
Jaga On/off: D07

JRT-100 TB
BLACK

8751 050019

JRT-100 TW
WHITE

8751 050017

JRT-200 W



8751 050021

RDG 260T



8751 050020

RDG264KN



8751 050018

		JRT-100 TB / TW	JRT-200 W	RDG 260T	RDG264KN
POWER SUPPLY					
supply voltage		24V DC	24V DC	24V DC	24V DC
OUTPUT / INPUT VOLTAGE					
valve 24V DC contact		2 (NO)	2	-	-
potential-free contact		-	-	3 (NO)	3 (NO)
input from keycard		-	-	✓	✓
input from window contact		-	-	✓	✓
fan (0 - 10 V DC)		max. +/- 10 mA	max. +/- 10 mA	max. +/- 5 mA	max. +/- 5 mA
manual 3-position		✓	✓	✓	✓
speed controller		✓	✓	✓	✓
automatic mode		✓	✓	✓	✓
APPLICATIONS					
2-pipe					
manual (H/C)		✓	✓	✓	✓
auto (H/C) - water temperature sensor required		-	-	✓	✓
4-pipe					
manual (H/C)		✓	✓	✓	✓
auto (H/C)		✓	✓	✓	✓
DIMENSIONS					
for wall mounting		-	✓	✓	✓
for recessed-mounting		✓	optional	optional	optional
POSITION					
LCD display with backlight		-	✓	✓	✓
LCD touch screen with backlight		✓	-	-	-
protection category IP20		-	✓	-	-
protection category IP30		✓	-	✓	✓
Integrated CO2-sensor		-	-	-	✓
humidity sensor		-	-	-	✓
FEATURES					
programmable time zones		✓	✓	✓	✓
control via Wi-Fi (smartphone app)		✓	✓	-	-
fan start delay		-	-	✓	✓
continuous fan speed		-	-	✓	✓
temperature sensor 80 cm		✓	optional	optional	optional

Maximum cable length in function of the number of units. For more information, contact Jaga.

		MAX. CABLE LENGTH (M)									
		5	10	15	20	25	30	40	50	75	100
TOTAL OUTPUT (W)	10	0.06	0.12	0.18	0.24	0.30	0.36	0.49	0.61	0.91	1.22
	20	0.12	0.24	0.36	0.49	0.61	0.73	0.97	1.22	1.82	2.43
	30	0.18	0.36	0.55	0.73	0.91	1.09	1.46	1.82	2.73	3.65
	40	0.24	0.49	0.73	0.97	1.22	1.46	1.94	2.43	3.65	
	50	0.30	0.61	0.91	1.22	1.52	1.82	2.43	3.04		
	60	0.36	0.73	1.09	1.46	1.82	2.19	2.92	3.65		
	70	0.43	0.85	1.28	1.70	2.13	2.55	3.40			
	80	0.49	0.97	1.46	1.94	2.43	2.92	3.89			
	90	0.55	1.09	1.64	2.19	2.73	3.28				
	100	0.61	1.22	1.82	2.43	3.04	3.65				
	110	0.67	1.34	2.01	2.67	3.34					
	120	0.73	1.46	2.19	2.92	3.65					
	130	0.79	1.58	2.37	3.16	3.95					
	140	0.85	1.70	2.55	3.40						
	150	0.91	1.82	2.73	3.65						

MIN. THREAD SECTION:

< 0.75 mm ²	< 1.5 mm ²	< 2.50 mm ²	< 4.00 mm ²
------------------------	-----------------------	------------------------	------------------------

SAMPLE WIRE DIAGRAMS ELECTRICAL INSTALLATION

Jaga aims to simplify your installation process with these sample diagrams. Perfectly align your power supply, thermostatic valve mounting, control system, pipe system, temperature monitoring and number of units per area.

Here, you can find the most common combinations. Feel free to ask for more variations at info@jaga.com.

1. POWER SUPPLY

Option 1: component power (inside the unit)

Option 2: power supply DIN-rail assembly
(outside the unit)

2. THERMOSTATIC VALVE

Option 1: on the tap (inside the unit)

Option 2: on the collector (outside the unit)

3. CHOICE OF CONTROL SYSTEM

Option 1: thermostat JRT-100TW

Option 2: thermostat JRT-100

Option 3: thermostat JRT-200

Option 4: thermostat RDG 160T

Option 5: home automation

4. HYDRONIC

Option 1: two-pipe system

5. TEMPERATURE MONITORING

Option 1: with temperature monitoring

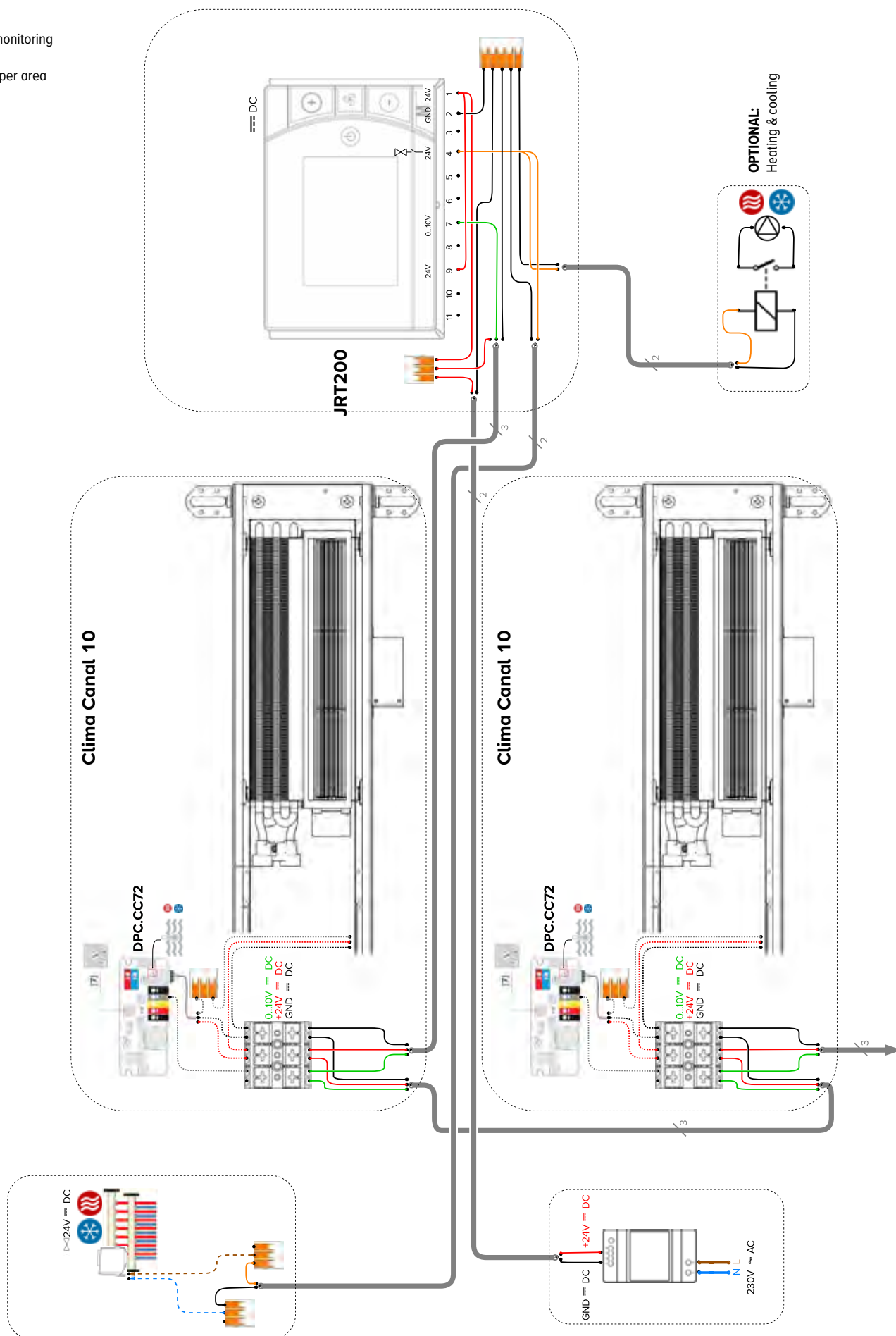
Option 2: without temperature monitoring

6. UNITS / ZONE

Option 1: one unit

Option 2: multiple units

- power supply DIN-rail assembly
- thermostatic valve outside the unit
- JRT200
- 2-pipe
- temperature monitoring
- JDPC
- multiple units per area



The indicated outputs at ΔT 50 are exact values measured in accordance with EN16430. This table provides a calculated value using an average correction factor for all other ΔT outputs, valid for all dimensions.

Click www.jaga.com/selection-tools/ to download the calculation tools with the exact outputs. The online calculation tools are kept up to date with the most recent data. Minor output differences between printed tables and the different online calculation tools are therefore completely normal and within the margins of tolerance imposed by the standard.

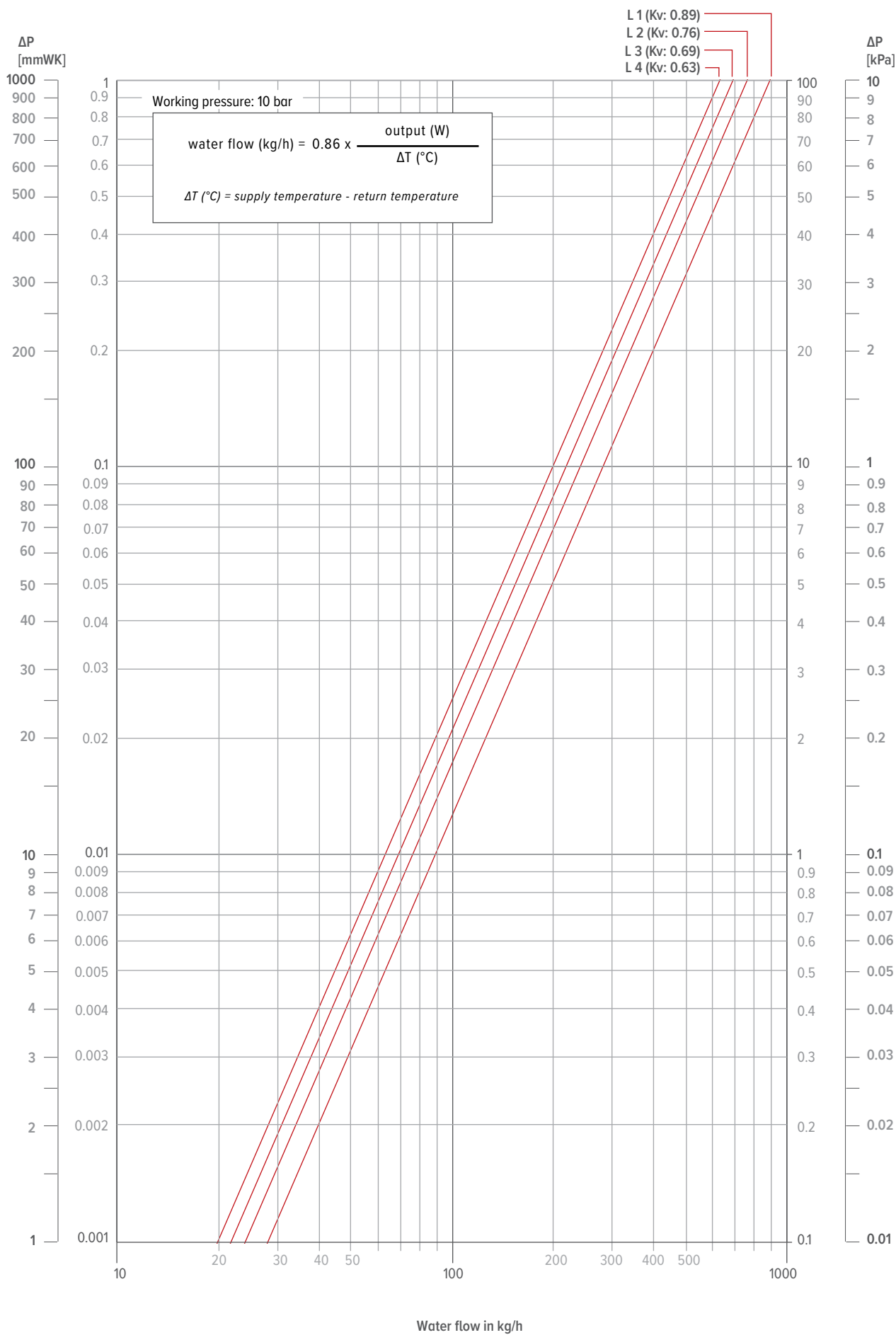
AVERAGE CORRECTION FACTORS DYNAMIC PRODUCTS - 75/65/20°C

room temperature: 20°C										Average N-value: 1.00											
	TR	65	60	55	50	45	40	35	30	25		TR	65	60	55	50	45	40	35	30	25
TA											TA										
75		1.00	0.95	0.89	0.83	0.76	0.69	0.62	0.53	0.42	75		0.92	0.86	0.81	0.74	0.68	0.61	0.52	0.42	0.26
70		0.95	0.90	0.84	0.79	0.72	0.66	0.58	0.50	0.39	70		0.87	0.82	0.76	0.70	0.64	0.57	0.49	0.39	0.24
65			0.85	0.80	0.74	0.68	0.62	0.55	0.47	0.37	65			0.77	0.72	0.66	0.60	0.53	0.46	0.37	0.22
60				0.75	0.70	0.64	0.58	0.51	0.43	0.34	60				0.67	0.62	0.56	0.49	0.42	0.34	0.20
55					0.65	0.60	0.54	0.47	0.40	0.31	55					0.57	0.52	0.46	0.39	0.31	0.18
50						0.55	0.49	0.43	0.37	0.28	50						0.47	0.41	0.35	0.27	0.15
45							0.45	0.39	0.33	0.25	45							0.37	0.31	0.24	0.13
40								0.35	0.29	0.22	40								0.27	0.20	0.11
35									0.25	0.18	35									0.17	0.08
30										0.14	30										0.06

room temperature: 24°C										Average N-value: 1.00											
	TR	65	60	55	50	45	40	35	30	25		TR	65	60	55	50	45	40	35	30	25
TA											TA										
75											75		0.92	0.86	0.81	0.74	0.68	0.61	0.52	0.42	0.26
70											70		0.87	0.82	0.76	0.70	0.64	0.57	0.49	0.39	0.24
65											65			0.77	0.72	0.66	0.60	0.53	0.46	0.37	0.22
60											60				0.67	0.62	0.56	0.49	0.42	0.34	0.20
55											55					0.57	0.52	0.46	0.39	0.31	0.18
50											50						0.47	0.41	0.35	0.27	0.15
45											45							0.37	0.31	0.24	0.13
40											40								0.27	0.20	0.11
35											35									0.17	0.08
30											30										0.06

GUIDELINE FOR LIMITING FLOW NOISE

TUBE	outer Ø	Wall thick-ness	Max. water speed (EN10255)	water content per metre	max. water flow	Maximum power at ΔT (° C) (T supply - T return)						
						ΔT 30	ΔT 20	ΔT 10	ΔT 5	ΔT 4	ΔT 3	ΔT 2
						mm	mm	m/s	l	kg/h	Watts	Watts
GALVANISED PIPE DIN 2440												
3/8 DN10 OD	17.2	2.35	0.40	0.12	173	6028	4019	2009	1005	804	603	402
1/2 DN15 OD	21.3	2.65	0.40	0.20	288	10046	6698	3349	1674	1340	1005	670
3/4 DN20 OD	26.9	2.65	0.42	0.37	559	19515	13010	6505	3253	2602	1952	1301
1 DN25 OD	33.7	3.25	0.49	0.58	1023	35690	23793	11897	5948	4759	3569	2379
1 1/4 DN32 OD	42.4	3.25	0.60	1.01	2182	76101	50734	25367	12684	10147	7610	5073
1 1/2 DN40 OD	48.3	3.25	0.66	1.37	3255	113549	75700	37850	18925	15140	11355	7570
2 DN50 OD	60.3	3.65	0.80	2.21	6365	222025	148017	74008	37004	29603	22203	14802
PRECISION METAL TUBE												
10/1	10	1.00	0.40	0.05	72	2512	1674	837	419	335	251	167
12/1	12	1.00	0.40	0.08	115	4019	2679	1340	670	536	402	268
14/1	14	1.00	0.40	0.11	158	5526	3684	1842	921	737	553	368
15/1	15	1.00	0.40	0.13	187	6530	4353	2177	1088	871	653	435
16/1	16	1.00	0.40	0.15	216	7535	5023	2512	1256	1005	753	502
18/1	18	1.00	0.40	0.20	288	10046	6698	3349	1674	1340	1005	670
22/1	22	1.00	0.40	0.31	446	15572	10381	5191	2595	2076	1557	1038
28/1	28	1.00	0.47	0.53	904	31522	21014	10507	5254	4203	3152	2101
RPE/ALU												
12/2	12	2.00	0.40	0.05	72	2512	1674	837	419	335	251	167
14/2	14	2.00	0.40	0.08	115	4019	2679	1340	670	536	402	268
16/1.5	16	1.50	0.40	0.13	187	6530	4353	2177	1088	871	653	435
16/2	16	2.00	0.40	0.11	158	5526	3684	1842	921	737	553	368
17/2	17	2.00	0.40	0.13	187	6530	4353	2177	1088	871	653	435
18/2	18	2.00	0.40	0.15	216	7535	5023	2512	1256	1005	753	502
20/2	20	2.00	0.40	0.20	288	10046	6698	3349	1674	1340	1005	670
26/3	26	3.00	0.40	0.31	446	15572	10381	5191	2595	2076	1557	1038
32/3	32	3.00	0.47	0.53	904	31522	21014	10507	5254	4203	3152	2101
40/3.5	40	3.50	0.56	0.86	1726	60220	40147	20073	10037	8029	6022	4015
50/4.25	50	4.25	0.66	1.35	3206	111824	74549	37275	18637	14910	11182	7455
63/5	63	5.00	0.80	2.21	6346	221359	147573	73786	36893	29515	22136	14757





versatile