

# 24V EC MOTOR High performance technology

# **CLIMA CANAL HYBRID**

- Low Temperature radiator
- Heating and cooling
- Build-in height of 10 > 14.5 cm

# **CLIMA CANAL**

- Low Temperature radiator
- Heating
- Build-in height of 8.5 > 13 cm

**jaga**HybridĤeating

# **Benefits**

- height adjustment and fine height adjustment
- Thermal Activators: 24 VDC
- electronic speed control via 0...10V signal
- sound pressure 29 dB(A), (med. speed = 80%)
- 2 flexible connections (Stainless steel) 15 cm
- aluminium grille (option wooden grille)
- mounting / protection panel
- can be installed as a continuous product, open spaces can be filled with empty ducts

# Standard grille

# Anodized aluminium

# Clima Canal Hybrid: heating and cooling (Watt)

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				Clima Canal Hybri	d	Clima Ca	nal Hybrid
Туре	CODE	Speed	Heating		Coo	ling	
			75 / 65 / 20° C	55 / 45 / 20° C	35 / 30 / 20° C	Total 7 / 12 / 25° C	Sensible 7 / 12 / 25° C*
1		Med	903	546	227	273	205
2		Med	2009	1201	500	545	410
3		Med	2912	1744	728	818	615
4		Med	4018	2403	1001	1090	820

ex: Flow T° water 75°C, return T° water 65°C, air inlet 20°C

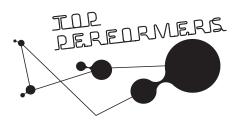
Flow T° cooling water 7°C, return T° cooling water 12°C, air inlet T° 25°C dry bulb T°, \* based on 50% RH (relative humidity)

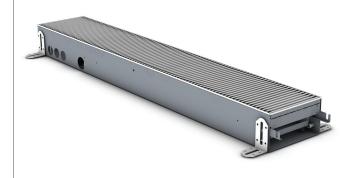
## Clima Canal: heating (Watt) \_

				Clima Canal	
Туре	CODE	Speed	Heating		
			75 / 65 / 20° C	55 / 45 / 20° C	35 / 30 / 20° C
1		Med	903	546	227
2		Med	2009	1201	500
3		Med	2912	1744	728
4		Med	4018	2403	1001

ex: Flow T° water 75°C, return T° water 65°C, air inlet 20°C

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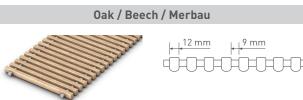




# **Options**

- height adjustable feet for raised floors
- empty ducts for continuous installation
- corner piece for continuous installation
- wooden grille(s)
- 0...10V thermostat

# Option: Wooden grille \_\_\_







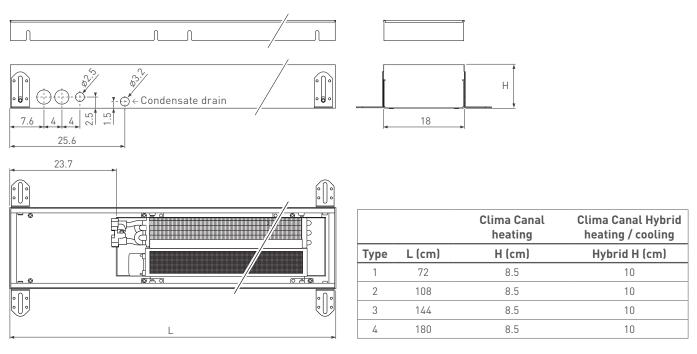
# Clima Canal Hybrid\_ Clima Canal\_parts\_dimensions

# Parts

- 1 protection panel
- 2 ALU grille (standard)
- **3** Stainless steel flexible connections length 15 cm 1/2"
- 4 fine adjustment height
- 5 end piece housing
- 6 height adjustment
- 7 Low-H20 heat exchanger
- 8 Thermal Activator(s) (tangential mini activator)
- 9 housing
- **10** Hybrid: condensation collection tray for drainage of condensate



# Dimensions (cm)

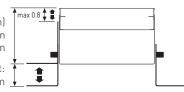


# Height adjustment (cm)



Fine adjustment height (max 0.8 cm) Clima Canal Hybrid: min 10 cm > max 10.8 cm Clima Canal: min 8.5 cm > max 9.3 cm

Height adjustment: max 4.5 cm





# Clima Canal Hybrid\_ Clima Canal\_options

# Option \_

# Height adjustable feet for raised floors

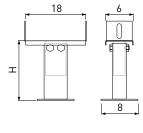


Wooden grille

- painted in the colour black RAL
- 7024 - easy installation using stain-
- less steel spring system
- (1 set = 2 height adjustments)

Number of feet per radiator





Code	H (cm)
	5 > 7
	8 > 13
	13 > 23
	20 > 30

L 180

L 144

Type Canal	CODE	Length (cm)
1		71.2
2		107.2
3		143.2
4		179.2

# Empty ducts (all Clima Canal Hybrid and Clima Canal (all standard lengths)

Available in:

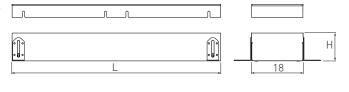
Oak natural

Oak varnished Beech natural Beech varnished Merbau natural Merbau varnished



To fill open spaces for a continuous installation

- without connection perforations
- with continuous grille
- with height adjustments and fine height adjustment



Clima Canal Hybrid			
Type Canal	CODE	Height (cm)	Length (cm)
1		10 > 14.5	72
2		10 > 14.5	108
3		10 > 14.5	144
4		10 > 14.5	180

Clima Canal			
Type Canal	CODE	Height (cm)	Length (cm)
1		8.5 > 13	72
2		8.5 > 13	108
3		8.5 > 13	144
4		8.5 > 13	180

## Corner piece



- for finishing angles
- includes cover plate painted in SS color
- height adjustment

Clima Canal Hybrid			Clima (	Canal
CODE	H (cm)	COD	E	H (cm)
	10 > 14.5			8.5 > 13



# Clima Canal Hybrid\_ Clima Canal\_accessories

# Control "plug and play system"\_complete control per residence

# CODE Description • records thermostat signals. • controls valves and activators. • 1 Room controller per room or room thermostat • regulation of ventilator speed.



Heating system controller 🔥

# (Heating system controller) - controls the heating boiler and/

 controls the heating boiler and or pump and/or valve.

CODE	Description
7990.020	Heating system controller

Cooling system controller 🔆 (only for Hybrid)



# (Cooling selector)

- controls the cooling unit and/or pump and/or valve.

[	CODE	Description	
	7990.030	Cooling system controller	

Cooling / Heating system controller 🌞 🔥 (only for Hybrid)



# er 🐲 🙌 (only for Hybrid

 (Heating / cooling selector)
 controls switching between cooling / heating (2 three-way valves).

CODE	Description
7990.040	Cooling / Heating system selection

# Thermostat

Jaga Clock Thermostat



# Automatic thermostat.

- day- night- and week programme.
- activators: auto / continuous.

CODE	Description	
7990.073	Jaga Clock Thermostat	



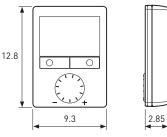
# Control + Thermostat\_control per room \_

# Room regulator with LCD screen

# 0...10 V control and thermostat for EC motors and valves. Alternative to the "plug and play system".



- 1 room regulator per room.
- automatic or manual heating / cooling changeove
- back-lighting display
- power supply DC 24V,
- control outputs DC 0-10 V
- minimum and maximum limits of the desired temperature



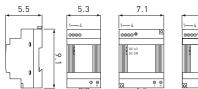
CODE	Description
8751.050006	Room regulator with LCD

### Supply\_



- small mounting depth
- safety: UL1310 Class 2
- convection cooling - DIN-rail or wall mounting

CODE	Description
7990.050	31,2 W
7990.051	60 W
7990.052	100,8 W







The warranty is only valid when using the original Jaga power supply.

Required power = sum of the capacities (power consumption) of the equipments

# **Technical data**

	Type:	7990.050	7990.051	7990.052	
Phases		1	1	1	
Output voltage between	VDC	24-28	24-28	24-28	
Output current	A	1,3	2,5	4,2	
Power	Watt	31,2	60	100,8	
Input voltage	VAC	90-264	90-264	90-264	
Weight	g	200	250	320	
Connections:			Screw connection		
Overload protection:		120 - 145%			
LED Display:		Green LED = on, Red LED = DC output Low			
Operating temperature:		-25 to +71 ° C			

### Accessories\_

Jaga	valve	and	motor	230	Volt
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- with varistor to protect against
- overload. with standard indicator (open/ closed)

CODE	Description
7990.409	180°-G 1/2" F/NG 230 Volt 2 Watt
7990.411	180°-G 3/4" F/NG 230 Volt 2 Watt

Jaga three-way valve and motor 230 Volt (only for Hybrid)



- with varistor to protect against overload.
- with standard indicator (open/ closed)

CODE	Description
7990.415	180°-G 3/4" F/NG 230 Volt 4 Watt
7990.417	180°-G 1" F/NG 230 Volt 4 Watt
7990.419	180°-G 1-1/4" F/NG 230 Volt 4 Watt
7990.420	180°-G 1-1/2" F/NG 230 Volt 4 Watt



# Clima Canal Hybrid\_ Clima Canal\_technical data

		Туре 1	Туре 2	Туре З	Type 4
		Physical data			
Length	cm	72	108	144	180
Width (without grille)	cm		1	8	
Clima Canal Minimal build-in height			8	.5	
Clima Canal Adjustment build-in height			8.5 > r	nax 13	
(Clima Canal Hybrid) Minimal build-in height	cm		1	0	
(Clima Canal Hybrid) Adjustment build-in height	cm		10 > m	ax 14.5	
Fine adjustment height	cm		ma	ax 1	
Activators	Qty	1	2	2	2
Control		Jaga plug a	nd play system or R	oom regulator with	_CD screen
		Outputs			
	He	ating 75 / 65 / 20° C			
Min	Watt	517	1137	1654	2274
Med	Watt	903	2009	2912	4018
Max (boost)	Watt	945	2075	3011	4145
	Не	ating 55 / 45 / 20° C			
Min	Watt	310	682	992	1364
Med	Watt	546	1201	1744	2403
Max (boost)	Watt	563	1238	1798	2474
	Не	ating 35 / 30 / 20° C			
Min	Watt	129	284	413	568
Med	Watt	227	500	728	1001
Max (boost)	Watt	234	516	749	1033
Co	oling (tota	l) only for Hybrid, 7 /	12 / 25° C		
Min	Watt	110	219	330	440
Med	Watt	273	545	818	1090
Max (boost)	Watt	284	576	849	1152
Cooling	(sensible) o	nly for Hybrid, 7 / 12	/ 25° C 50% RH		
Min	Watt	83	165	248	330
Med	Watt	205	410	615	820
Max (boost)	Watt	213	433	638	866
		C Motor (24VDC)			
Sound pressure min speed	dB(A)	19	20	22	23
Sound pressure med speed	dB(A)	29	32	34	35
Sound pressure max speed	dB(A)	34	37	39	40
Speed min (4.5VDC control)	RPM			60	
Speed med (8VDC control)	RPM			50	
Speed max (10VDC control)	RPM	-		40	
Consumption min speed	Watt	1,56	1,98	2,30	2,83
Consumption med speed	Watt	3,17	4,80	6,70	8,25
Consumption max speed	Watt	4,37	6,70	10,30	12,10
Air flow min speed (c)	m3/h	40	83	123	165
Air flow med speed	m3/h	<b>59</b>	119	178	238
Air flow max speed	m3/h	70	142	213	284
-	L /h	47	94	140	187
Cooling flow (med) (only Hybrid)					

ex: Flow T° water 75°C, return T° water 65°C, air inlet 20°C

Flow T° cooling water 7°C, return T° cooling water 12°C, air inlet T° 25°C dry bulb T°, 50% RH (relative humidity)



# Clima Canal Hybrid\_ Clima Canal\_product description

- inner duct with height adjustment and SS grille supports.
- anodized aluminium grille(s)
- Low-H<sub>2</sub>O heat exchanger.
- Thermal activator(s), (tangential mini activator).
- 2 pieces stainless steel flexible connections 1/2", length of 15 upto 25 cm

### Clima Canal Hybrid\_heating and cooling:

 pre-assembled heating unit for building into the floor, comprising a 1 mm-thick duct of Sendzimir galvanized steel plate and a telescopically adjustable height adjustment with stainless steel grille holder, coated with a charcoal grey scratch-proof epoxypolyester lacquer, RAL 7024, 10% gloss.

The appliance is equipped as standard for heating and for connection to traditional water heating systems, but can also be used for cooling with a chilled water supply, and for connection to mechanical ventilation systems.

- A minimum recess depth of 100 mm below finished floor level is required. The appliance is equipped with a height adjustment from 0 to 45 mm and a fine height adjustment up to + 8 mm to perfectly align the appliance with the finished floor.
- there are 4 connection openings in the outer duct for the passage of the hydraulic pipes and electric cables. These openings - in the side
   are sealed with black insulation tape.
- the shaft is also equipped with a condensate drain ø 32/2 mm
- two head ends are supplied, equipped with a stainless steel grille support and aluminium rivets with countersunk heads for finishing the ends of the inner duct.
- all components are secured with special spring steel suspension hooks, so all the parts can be removed extremely quickly and easily for regular cleaning and maintenance without hydraulic or electrical disconnection.

### Clima Canal\_only heating:

 pre-assembled heating unit for building into the floor, comprising a 1 mm-thick duct of Sendzimir galvanized steel plate and a telescopically adjustable height adjustment with stainless steel grille holder, coated with a charcoal grey scratch-proof epoxypolyester lacquer, RAL 7024, 10% gloss.

The appliance is equipped as standard for heating and for connection to traditional water heating systems, and for connection to mechanical ventilation systems.

- possible to achieve a minimum recess depth of 85mm without problems. The appliance is equipped with a height adjustment from 0 to 45 mm and a fine height adjustment up to + 8 mm to perfectly align the appliance with the finished floor.
- there are 3 connection openings in the outer duct for the passage of the hydraulic pipes and electric cables. These openings - in the side
   are sealed with black insulation tape..
- two head ends are supplied, equipped with a stainless steel grille support and aluminium rivets with countersunk heads for finishing the ends of the inner duct.
- all components are secured with special spring steel suspension hooks, so all the parts can be removed extremely quickly and easily for regular cleaning and maintenance without hydraulic or electrical disconnection.

# General:

# Aluminium grille

- Aluminium floor grille panels L 360 mm with EPDM holder 16.5 mm.
- profile: 6 x 14 mm.
- spacing 9 mm.
- material: AISI 304
- Roll-up wooden grille
- Wooden profiles positioned crossways.
- profile: 12 x 15 mm.
- spacing 13 mm.

The wooden profiles are connected by way of a galvanised spring. The correct interspace is assured by aluminium spacers.

Versions: oak / beech / oak varnished / beech varnished / merbau / merbau varnished.

Low-H<sub>2</sub>O heat exchanger

Round, seamless circular pipes in pure copper, connected to pure aluminium panels with a spacing of 1.8 mm and an integrated brass collector, including air venting.

- the heat exchanger electrostaticaly lacquered with black epoxy-polyester, gloss degree 70%.
- element pressure test: 20 bar.
- operating pressure: max 10 bar.
- standard connection left.

### Activators

One or more virtually noiseless tangential activators, 24 VDC, with Sendzimir galvanized steel plate cover and integrated stainless steel air filter.

Colour black, glossiness 70%.

### **Electric connection**

Integrated electric connection box with manual tension spring system. Standard connection left.

### How to install: \_

The installer will propose all the heating elements, while taking into account the following requirements:

- a heat loss calculation according to the standard;
- heat emission and measurement tables in compliance with the tables and Clima Canal fitting instructions supplied by the manufacturer
- the heating elements are connected to a two-pipe system / singlesided connection. Standard connections left
- install the Clima Canal with the convector side towards the exterior side of the room
- the distance between the Clima Canal and the window should allow for any pelmets. Curtains should never be hung above the Clima Canal. The heating element should be accessible at all times for maintenance.
- if the appliance is not mounted directly on the floor, the space between the underside of the appliance and the floor must be filled with a stable filling, e.g. concrete infilling.

Manufacturer: Jaga N.V.

Type: Clima Canal Hybrid Clima Canal



Easy maintenance: When using the standard provided with the stainless steel flexible connections (length 15 cm 1/2"), the internal mechanism is completely removable.



