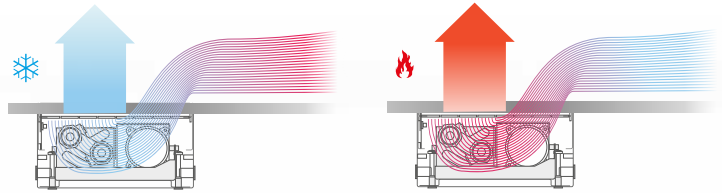


jaga

Compact floor recessed fancoil unit

- CLIMA CANAL HEATING AND COOLING:
Build-in height of 3.94" > 5.71"
- CLIMA CANAL HEATING ONLY:
Build-in height of 3.35" > 5.43"
- electronic control: 0...10V signal
- 24V EC motor

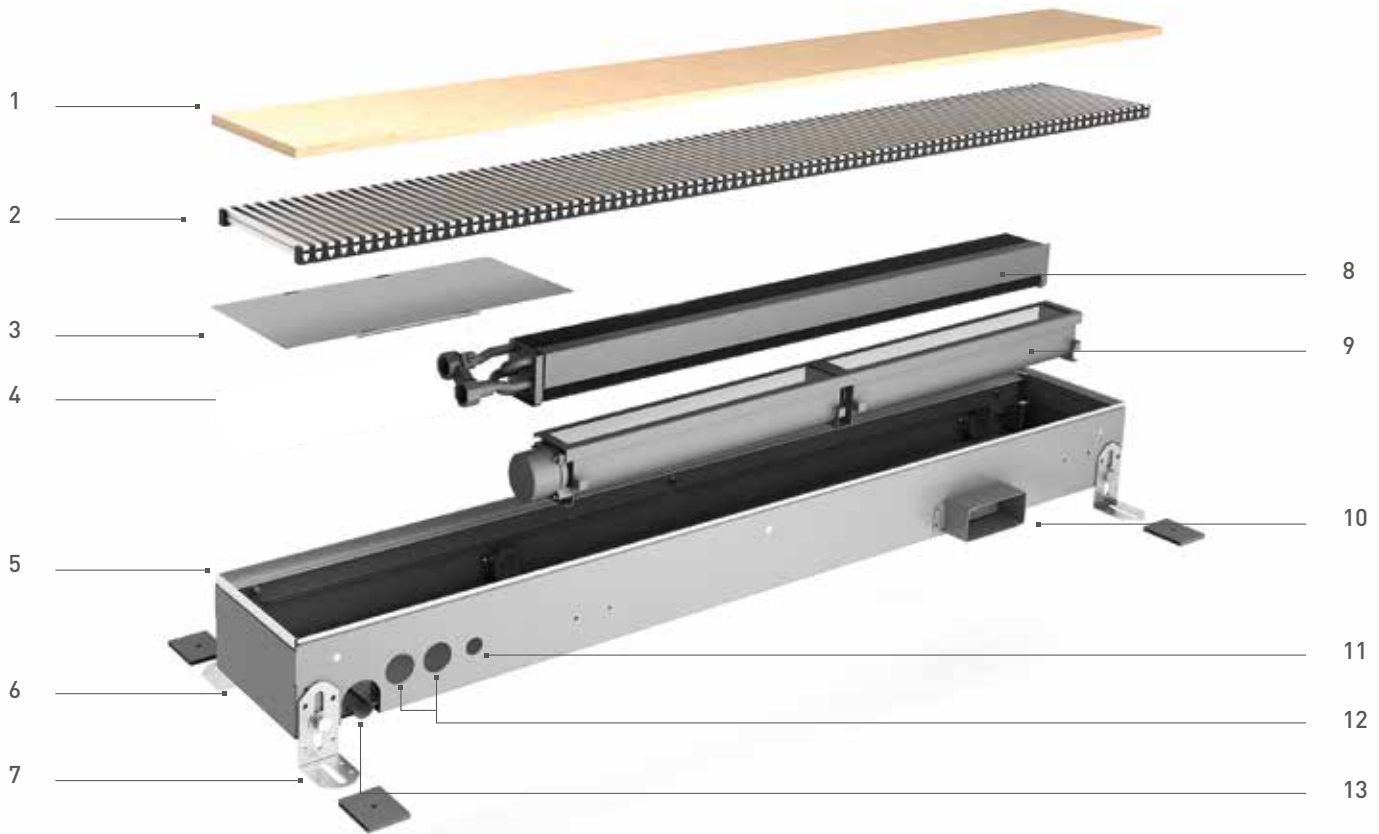


jagaHybridHeating

CLIMA CANAL HYBRID
HEATING AND COOLING

CLIMA CANAL
HEATING

Parts



1	Protective cover
2	Alu or wooden grille
3	Cover plate
4	1/2" NPT connections
5	Internal height adjustment
6	End cap
7	External height adjustment with acoustic insulation

8	Dynamic coil
9	Tangential fan with EC motor
10	Connection for ventilationsystem (OPTION)
11	Electrical connection 24VDC always on the left hand side
12	Hydraulic connection always on the left hand side
13	Condensate drain

Height adjustment (inch)

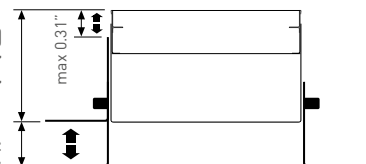


< internal height adjustment

< external adjustment

internal height adjustment (max 0.31")
 Clima Canal Heating/cooling: min 3.94" > max 4.25"
 Clima Canal heating only: min 3.35" > max 3.66"

external height adjustment:
 max 1.77"





Clima Canal dimensions / grille

General info

Benefits

- Internal and external height adjustment for perfect installation
- 24VDC EC motors with balanced fans
- electronic speed control via 0...10V signal
- quiet operation
- aluminium grille / wooden grille
- with heel proof option available
- wooden cover plate for protection during installation
- continuous installation, open spaces can be filled with empty ducts

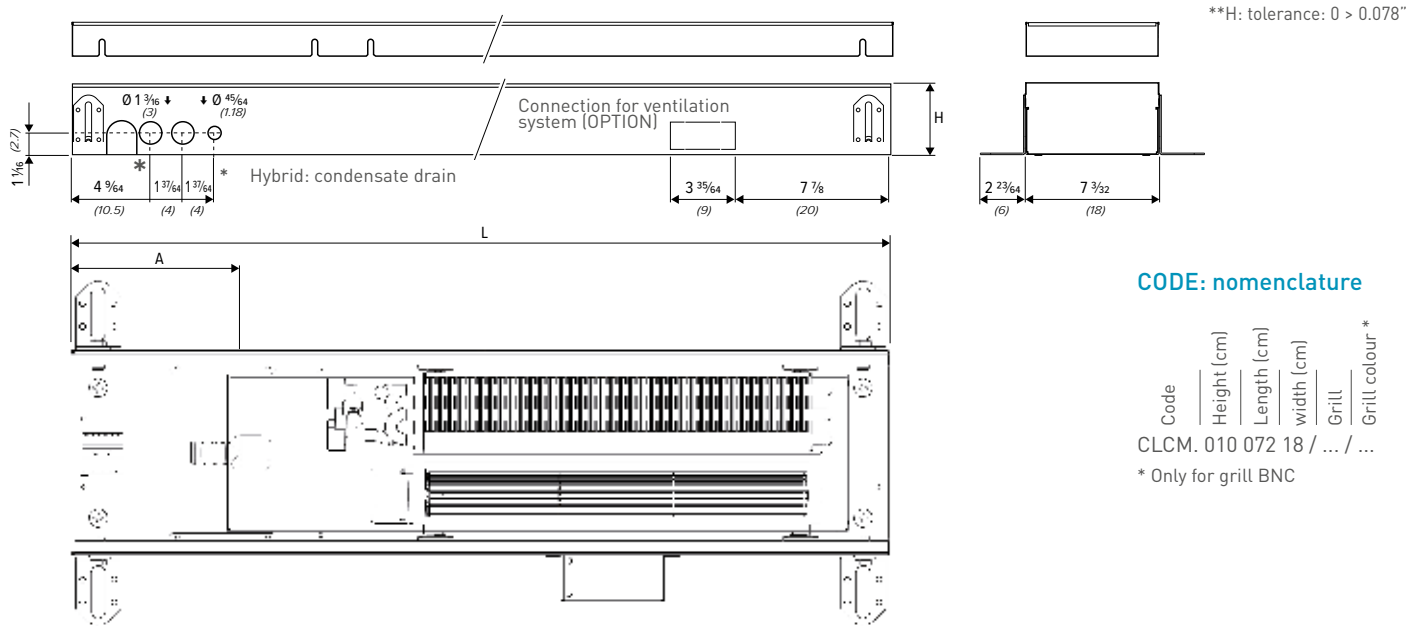
Option

- adjustable feet for raised floor
- empty trenches for continuous installation
- corner piece for continuous installation

Accessories

- JDPC On/off controller with water temperature sensor
- Power supply 24 VDC/VAC

Dimensions



CODE: nomenclature

Code	Height (cm)	Length (cm)	width (cm)	Grill	Grill colour*
CLCM. 010 072 18 / ... / ...					

* Only for grill BNC

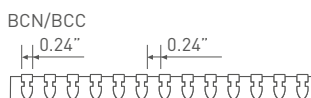
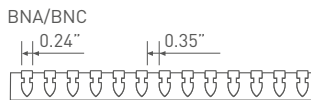
L (cm)	L (inch)	A (inch)	Clima Canal -Heating only -		Clima Canal HYBRID -Heating Cooling-	
			** H (cm)	* H (inch)	* H (cm)	* H (inch)
72	28.35	9.06	8.5	3.34	10	3.93
108	42.52	8.66				
144	56.69	7.28				
180	70.87	5.71				

Grille

Aluminium grille



BNA Alu nature
BCN Alu nature

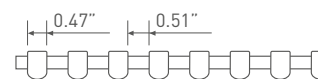


* BNC/... Alu lacquered
* BCC/... Alu lacquered
* To ensure perfect adherence of the powder coating, a wear and UV-resistant polyester powder coating is used. Only in glossy (code 2.); or special color, code: 006 / 005 / 028 / 026

Wooden grille



BON Oak
BBN Beech
BOV Oak varnished
BBV Beech varnished





Heating capacity **

170/150/68°F

Clima Canal	10 V	8 V	6 V	4 V	2 V
L072	3752	3107	2437	1731	964
L108	7724	6397	5018	3563	1984
L144	12137	10053	7885	5599	3118
L180	16551	13709	10752	7635	4252

130/110/68°F

Clima Canal	10 V	8 V	6 V	4 V	2 V
L072	2120	1756	1377	978	545
L108	4364	3614	2835	2013	1121
4646	6858	5680	4455	3163	1762
L180	9351	7745	6075	4314	2402

95/85/68°F

Clima Canal	10 V	8 V	6 V	4 V	2 V
L072	899	745	584	415	231
L108	1851	1533	1202	854	475
L144	2908	2409	1889	1342	747
L180	3966	3285	2576	1829	1019

Water flow heating (170/150/68°F 10V)

Clima Canal	GPM
L072	0.37
L108	0.77
L144	1.21
L180	1.65

- Supply water/Return water/Room air (°F)
- Supply water/Return water/Room air (°F) dry bulb, 50% RH (relative humidity)

** outputs for BNA / BNC grilles with 60% free area. Grilles with a free area of 50% have a deration factor of 0.8.

- according to EN 16430

Cooling capacity (Hybrid only) **

60/65/80 (DRY)

Clima Canal	10 V	8 V	6 V	4 V	2 V
L072	614	477	345	218	100
L108	1264	982	709	449	205
L144	1986	1543	1115	705	322
L180	2708	2104	1520	961	439

45/55/80°F 50% total *

Clima Canal	10 V	8 V	6 V	4 V	2 V
L072	1437	1109	779	473	209
L108	2960	2281	1602	967	432
L144	4278	3583	2515	1519	676
L180	6340	4885	3429	2078	919

45/55/80°F sensible *

Clima Canal	10 V	8 V	6 V	4 V	2 V
L072	1005	766	531	319	139
L108	2069	1575	1093	652	287
L144	3248	2475	1716	1024	450
L180	4432	3374	2340	1400	612

Water flow cooling (45/55/80°F 10V)

Clima Canal	GPM
L072	0.29
L108	0.59
L144	0.93
L180	1.27



Clima Canal technical data

Jaga Clima Canal: Technical data						
		L 072	L 108	L 144	L 180	
Coil	Fins Per Inch (FPI)	42 fins per 3.94 inch				
	Face Area ft ²	0.035 ft ²				
	Coil connections inch	1/2 NPT				
Fan	Quantity	1	1	2	2	
	Diameter inch	1.77				
	Width inch	12.99	1x25.98	1x12.99, 1x25.98	2x25.98	
Control	0-10V DC fan speed control					
EC Motor (24VDC)	Consumption W	2V	0.5	0.6	1.1	1.2
		4V	0.8	1.3	2.1	2.5
		6V	1.3	2.7	4.0	5.4
		8V	2.1	4.6	6.6	9.1
		10V	3.0	7.1	10.1	14.1
	RPM Speed med (7 VDC)		1950			
	RPM Speed max (10VDC)		2340			
	* Sound pressure dB(A)	2V	14	15	16	18
		4V	15	19	20	22
		6V	23	29	30	32
8V		28	32	35	37	
10V		34	37	39	41	
Voltage (V)		24VDC				
Air Flow	CFM	2V	14	25	39	49
		4V	22	44	66	88
		6V	31	58	88	115
		8V	40	74	114	147
		10V	46	94	141	188
Cabinet	Height, inch (HYBRID)*	adjustable between: min 3.94 > max 5.71				
	Length inch	28.35	42.52	56.69	70.87	
	Width inch	7.09				
	secondary height adjustment inch	max 0.39				
	Weight lbs	14.11	22.27	31.75	41.45	
	Weight lbs (HYBRID)*	17.2	27.56	39.46	52.69	

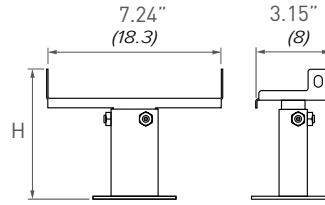
* with an assumed room attenuation of 8 dB(A) / content of the room 75 m³ / reverberation time 0.5 sec. / measured at 1 m height and 2 m from the appliance.

Options

Adjustable feet for raised floors



- powder coated in RAL color 7024
- easy installation
- (1 set = 2 pedestals)



CODE	H (inch)
5209.05070000	1.97 > 2.76
5209.08130000	3.15 > 5.12
5209.13230000	5.12 > 9.06
5209.20300000	7.87 > 11.81

Number of feet per length:

1 set



2 sets

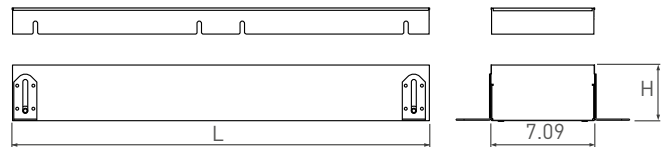


Empty trenches



For a continuous look

- closed trenches
- with continuous grille
- with height adjustments (internal and external)
- with end caps



Clima Canal	
H	L
008	072 cm (28.35")
	108 cm (42.52")
	144 cm (56.69")
	180 cm (70.87")

CLCD.008 072 18 /... /...

Fill in Grill code

Fill in Grill colour code (BNC)

Clima Canal Hybrid	
H Canal	L
010	072 cm (28.35")
	108 cm (42.52")
	144 cm (56.69")
	180 cm (70.87")

CLCD.010 072 18 /... /...

Fill in Grill code

Fill in Grill colour code (BNC BCC)

Corner piece



For continuous installations

- mitered grill section
- height adjustment

Clima Canal Hybrid	
CODE	Grill
CLCD.010 025 18/BNA	Alu. natural
CLCD.010 025 18/BNC/...	Alu. lacquered

Fill in Colour code

Clima Canal	
CODE	Grill
CLCD.008 025 18/BNA	Alu. natural
CLCD.008 025 18/BNC/...	Alu. lacquered

Fill in Colour code

Connection for ventilation

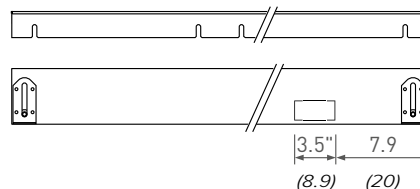


Size (3.54" x 1.57")

Add /VEN to Clima Canal code:

Sample:

CLCM.008 072 18 /... /VEN





JAGA Dynamic Product Control , Jaga Control panel



On - Off controller, as a stand alone system

Heating: The fans will start when the water temperature sensor detects 28°C / 83°F water in the coil.

Cooling: The fans will start when the water temperature sensor detects 18°C / 64°F water in the coil.

Installation

Electrical connections: IMPORTANT!

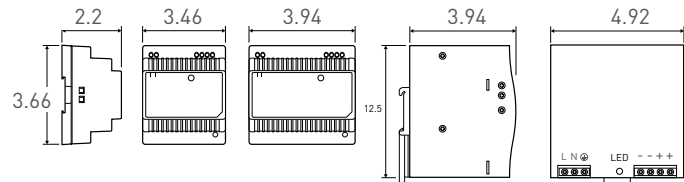
- the warranty is only valid when using the power supply provided by Jaga
- the Jaga DPC is polarization-sensitive. By mixing the minus and plus connection, the controller will be damaged. This damage is not covered by Jaga warranty.
- the electrical connection of the unit must be carried out by qualified personnel, in compliance with the regulations applicable in the country where the unit is installed
- non-conforming electrical connections releases Jaga from liability concerning damage to objects and persons

Accessories

Power supply 24VAC

- To be installed inside an electrical enclosure
- small installation depth
- safety: UL1310 Class 2
- passive cooling (no fan)
- DIN-rail installation

CODE	Description
7990.050	36 W
7990.051	60 W
7990.052	100 W
7990.053	240 W



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

Required power = sum of the power consumption of all components + 15% for start-up



Technical data	CODE >	7990.050	7990.051	7990.052	7990.053
Power	Watt	36	60	100	240
Output voltage	VDC	24-28			
Output current	A	1,3	2,5	4,2	5
Input voltage	VAC	85-264	88-264		85/264
	VDC	120-370	124-370		120/370
Weight	lbs	0.66		0.77	2.64
Overload protection		120 - 145%			
LED		DC ok			
Operating temperature		-40 > +185 ° F			

Clima Canal Cable length according to number of devices (feet) (max. voltage drop 5%)

Max. distance from power supply in ft	32	65	98	131	164	197	230	262	295	328
---------------------------------------	----	----	----	-----	-----	-----	-----	-----	-----	-----

Wire size ↓ Type 1 (3.0W), number Clima Canals:

17 AWG	18	9	6	4		3		2	1
--------	----	---	---	---	--	---	--	---	---

16 AWG	28	14	9	7	5	4	3	2	1
--------	----	----	---	---	---	---	---	---	---

14 AWG	47	23	15	11	9	7	6		5
--------	----	----	----	----	---	---	---	--	---

Wire size ↓ Type 2 (7.1W), number Clima Canals:

17 AWG	12	6	4	3			2		
--------	----	---	---	---	--	--	---	--	--

16 AWG	18	9	6	4		3		2	
--------	----	---	---	---	--	---	--	---	--

14 AWG	30	15	10	7	6	5	4		3
--------	----	----	----	---	---	---	---	--	---

Wire size ↓ Type 3 (10.1W), number Clima Canals:

17 AWG	8	4			2			1	
--------	---	---	--	--	---	--	--	---	--

16 AWG	12	6	4	3			2		
--------	----	---	---	---	--	--	---	--	--

14 AWG	20	10	6	5	4	3		2	
--------	----	----	---	---	---	---	--	---	--

Wire size ↓ Type 4 (14.1W), number Clima Canals:

17 AWG	6	3	2		1				
--------	---	---	---	--	---	--	--	--	--

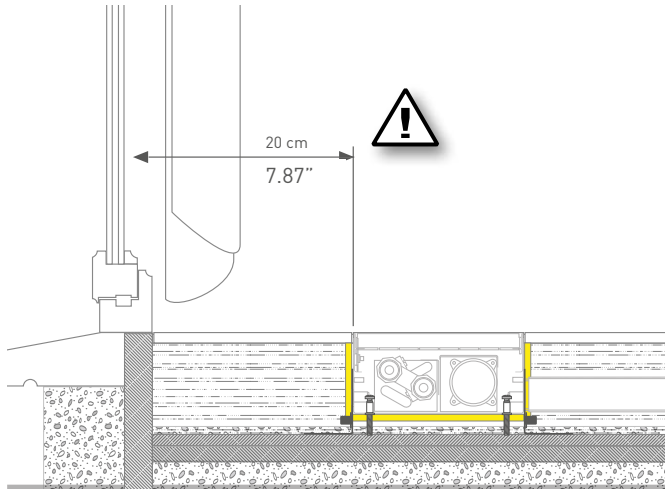
16 AWG	10	5	3			2			1
--------	----	---	---	--	--	---	--	--	---

14 AWG	17	8	5	4		3		2	
--------	----	---	---	---	--	---	--	---	--

Attention !!

When used for cooling: the pipes must have sufficient thermal insulation to prevent condensation

Allow sufficient space for curtains!



Cleaning the trench

- cleaning at regular interval is important, depending on the use and function of the room

Cleaning the grate

- clean the grate at regular intervals, depending on the usage and function of the room.
- the grate must not be dismantled for maintenance and can simply be cleaned with a vacuum cleaner.

What is sound power, sound pressure

Sound power is noise production of the device itself (sound source). The sound power is thus considered as a fixed value independent of external factors.

Sound pressure is the perceptible sound. This depends on the installation and several factors:

- the location of the device
- room acoustics
- the distance from sound source
- the reflection of the sound (depending on the size and the height of the room and the materials used)

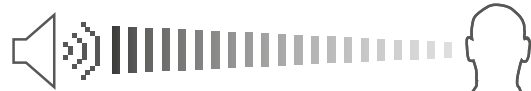
Note: The sound power is always higher than the perceived sound pressure.

Reverberation time:

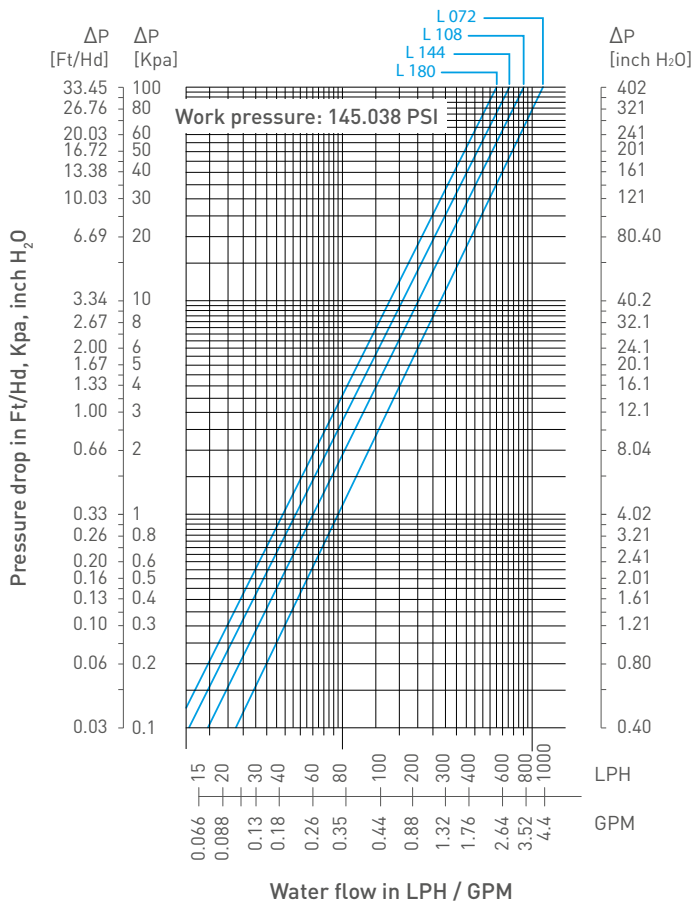
Reverberation time is the time - in seconds - which is necessary to lower the sound pressure level of 60 dB after the sound source is switched off. This shows that the reverberation time in a large room will be larger than in a small room. Particularly the acoustics and decoration of the room determines the reverberation time.

Sound power

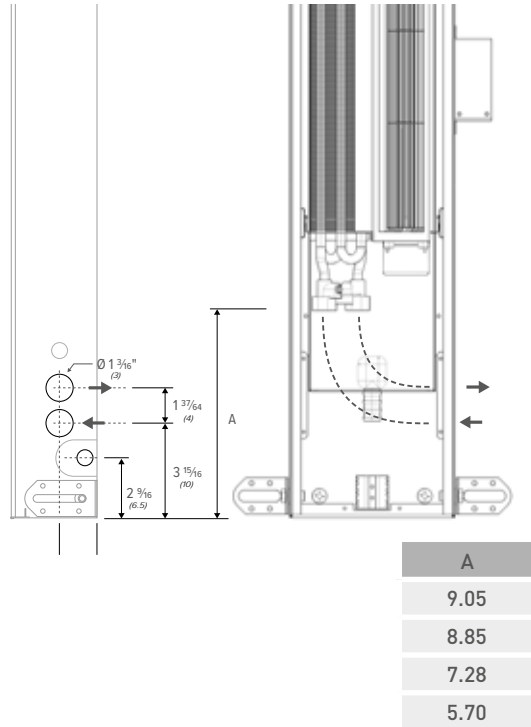
sound pressure



Clima Canal_pressure drop



Dimensions hydraulic connection (INCH)



Rim insulation:

If a poured concrete floor is installed, rim insulation is required on the long side of the trench; to allow natural expansion of the concrete during heating or cooling.

Acoustic isolation

Insulation

Sound is reflected by hard materials. Soft, porous substances are best suited to absorb airborne sound.

Contact sound insulation

Sound travels very easily in hard materials.

A. Quality of the placement

Contact points

Make sure that vibrations cannot be transferred between different elements, e.g. between the built-in heaters, through pipes, along air ducts etc.

Hollow acoustic spaces.

Install acoustic insulation in hollow acoustic spaces. Avoid cavities between insulation and pipes.



Clima Canal product description

Product description

- trench with internal height adjustment and SS grille supports.
- anodized aluminium grill(s)
- dynamic coil
- fans, (tangential mini fan)

Clima Canal Hybrid_heating and cooling:

- pre-assembled trench fancoil for recessed floor installation, built with 0,4", pre-coated dark gray (RAL 7024, 10% gloss) galvanized steel and stainless steel grill support. The internal height adjustment allows fine tuning after installation.
- the trench fancoil is intended for heating and cooling with a hydronic system, connection to mechanical ventilation systems is possible with the optional connection piece for ventilation.
- a minimum recess depth of 4" below finished floor level is required. The fancoil unit is equipped with an external height adjustment from 0 to 1.77" and an internal height adjustment up to + 0.315" to perfectly align with the finished floor.
- there are 4 perforations in the trench to allow installation of the supply, return and drain pipes, and for the electrical wires. These perforations are sealed with black insulation tape.
- two end caps are supplied, with a stainless steel trim.
- fans and coil are installed with spring steel clips, to allow easy removal for periodical cleaning and maintenance without hydraulic or electrical disconnection.
- the trench is equipped with a condensate drain with a metal stub out for connection to the drain pipes

Clima Canal_only heating:

- pre-assembled trench fancoil for recessed floor installation, built with 0,4", pre-coated dark gray (RAL 7024, 10% gloss) galvanized steel and stainless steel grill support. The internal height adjustment allows fine tuning after installation.
- the trench fancoil is intended for heating with a hydronic system connection to mechanical ventilation systems. Is possible with the optional connection piece for ventilation.
- a minimum recess depth of 3.35" below finished floor level is required. The fancoil unit is equipped with an external height adjustment from 0 to 1.77" and an internal height adjustment up to + 0.315" to perfectly align with the finished floor.
- there are 4 perforations in the trench to allow installation of the supply, return and drain pipes, and for the electrical wires. These perforations are sealed with black insulation tape.
- two end caps are supplied, with a stainless steel trim.
- fans and coil are installed with spring steel clips, to allow easy removal for periodical cleaning and maintenance without hydraulic or electrical disconnection.

General:

Aluminium grille:

Aluminium floor grille bars L 14.17" with EPDM holder 0.65".

- profile: 0.24" x 0.55"
- spacing: 0.35"/0.24" BNA/BCN.
- material: Aluminium

Roll-up wooden grille:

Wooden profiles

- profile: 0.47" x 0.59"
- spacing: 0.51"

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

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

Dynamic coil:

Round, seamless circular pipes in pure copper, connected to pure aluminium fins with a spacing of 0.07" and an integrated brass collector, including air vent.

- coil electrostatically painted with black epoxy-polyester, 70% gloss
- element pressure test: 290 psi.
- operating pressure: max 145 psi.
- 1/2" NPT standard connection left.

Fans

One or more tangential fans, 24 VDC, with galvanized steel plate cover and integrated protection grate.

Colour black, 70% gloss.

Electrical connection

Integrated connector with press fitting.

Standard connection left.

How to install:

Design of the system has to be done by a certified professional, based on the local building codes and:

- a heat loss and cooling load calculation must be carried out in function of the local climate and building codes.
- the performance of the units must be calculated based on the technical specifications, provided by the manufacturer. For alternative water temperatures, correction factors are applicable. A selection tool is available for professional engineers upon request.
- The coil is designed for use in a two pipe system with same end connections. Standard connections left
- The trench must be installed with the fan installed on the room side and the coil oriented towards the facade.
- In case curtains are installed, the distance between the window and trench must allow airflow into the room. The trench should never be covered by any type of curtain or furniture.
- if the trench is not installed directly on the concrete deck, the gap between the trench and concrete deck must be filled with wet cement or spray foam.

Manufacturer: Jaga

Type: Clima Canal Hybrid

Clima Canal



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