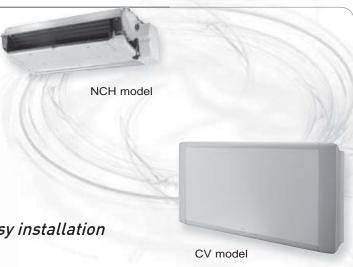


→ Comfort units

Versatile unit meeting
all building-specific constraints.

Eco-design
and energy efficiency
Improved occupant comfort,
very low sound level
Innovative design ensuring easy installation
and simplified maintenance











MAJOR LINE

Designed for heating and cooling, **MAJOR LINE** is available in 4 models (cased or uncased, horizontal or vertical).

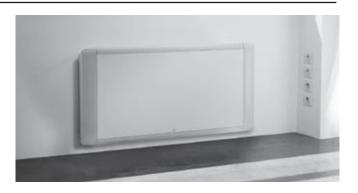
Thanks to its different assembly options and range of accessories, the versatility of the MAJOR LINE means it can be adapted to any type of installation.

In Europe, it has become a benchmark solution for renovations of large office blocks and hotel chains and restoration of buildings, etc.

Modern aesthetic lines, excellent sound levels and optimised thermal performance,... with Major Line, CIAT offers a comfort solution which is both economic and quick to set up.

INNOVATIVE DESIGN

A true stylistic evolution, Major Line has distinguished lines with a slim and elegant shape. Its attractive and modern design will blend in perfectly with all types of interior.





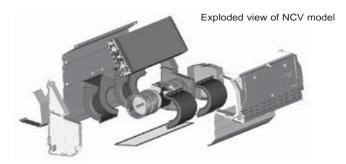
INNOVATIVE DESIGN

- New shaped ABS volute (V0) designed to optimise output and performance.
- 160 mm HEE impeller (High Energy Efficiency), with CIAT-exclusive airfoil blades in self-extinguishable ABS (V0).

Hydraulic coil with total frontal surface increased from 5 to 15% (according to the size and in relation to the units of previous ranges) for improved performance and output.

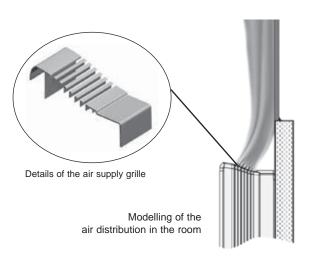


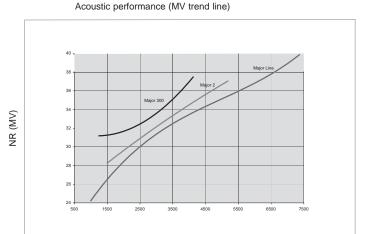
Shaped ABS volute



LATEST GENERATION OF COMFORT

- Improved control of the supply air temperature to reduce discomfort.
- Diffusion grille optimised in our Research & Innovation Centre for increased overall comfort in accordance with the most demanding standards.





MV cooling capacity (W)

VERSATILITY OF THE MODELS

Two versions:

- Cased (exposed mounting)
- Uncased (flush-mounted)
- → A single reference for the two applications: CV (Cased Vertical unit)/CH (Cased Horizontal unit).
- → A single reference for the two applications: NCV (Uncased Vertical unit)/NCH (Uncased Horizontal unit).

Units with left/right hydraulic connections available for easier adaptation to refurbished buildings.

Cased or uncased models available with classic air recovery (assemblies 1, 41, 1V and 41V) and front mounted air recovery (assemblies 1D, 41D, 1VD and 41VD).

A large selection of accessories available in:

- → Fresh air and mixing
- → Air distribution and return air

For NCH, the hydraulic and electrical connections can be supplied on the same side making the unit more compact and simplifying installation.

Unit operates with 50 and 60 Hz supply.



Comfort units

EXTENSIVE CAPACITY RANGE

Capacities covered by Major Line in Eurovent operation:

- 2-tube cooling capacity (27 °C, WB 19, 7/12°C): 0.7 to 7.5 kW
- 2-tube heating capacity (air 20°C, water 50°C): 1 to 10.9 kW
- 4-tube cooling capacity (27°C, WB 19, 7/12°C): 0.8 to 7.6 kW
- 4-tube heating capacity (air 20°C, water 70/60°C): 1 to 7.3 kW
- Pan in ABS and PSE insulation thickness greater than 20 mm meets application requirements in all countries and climates.
- Solutions for the new buildings of tomorrow with minimal needs (low energy buildings) and responses for high capacity geographical areas.
- Large selection of coils to meet the customised water temperature conditions of today and tomorrow.



Water heat exchange coil



Condensate drain pan with reinforced insulation.

COMPLIANCE WITH ENERGY AND ENVIRONMENTAL REQUIREMENTS

- A small size developed for buildings whose use of energy is optimised.
- Intelligent design of the unit allowing the absorbed power of the standard motor to be reduced by an average of 20%.
- Reduction of the electrical heating power (resistors) to better fit the requirements of new buildings.
- HEE motor (very low consumption) also available as an option for this range.



Eco-design

- The MAJOR LINE comfort unit is at least 85% recyclable.
- MAJOR LINE has been designed using up to 20% less raw materials compared with previous ranges.
- 100% of the MAJOR LINE's parts are made from ABS. They are recyclable and stamped with the logo below which enables the materials used to be traced and thus facilitates sorting at the end of its life.
- Designed for easy dismantling at end of life.
- The French production sites of the CIAT group are ISO 14001 certified. This certification is awarded for environmental management, thereby formalising the company's contribution to sustainable development.







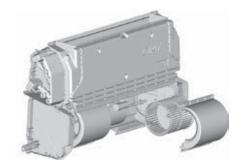




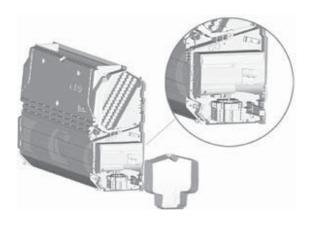
EASY INSTALLATION AND MAINTENANCE

- Filter easily accessible.
- Single piece casing easily removed with two screws in the lower part of the unit.
- When repairing the fan motor assembly, only the defective part need to be replaced: only the motor or the impeller.
- All the speeds are connected to the electrical terminal of the unit and are easily accessible on site for personalised adjustment.
- No plastic moving parts on the casing (hinged access hatch for example) for increased durability of the unit over time.





INCREASED SAFETY



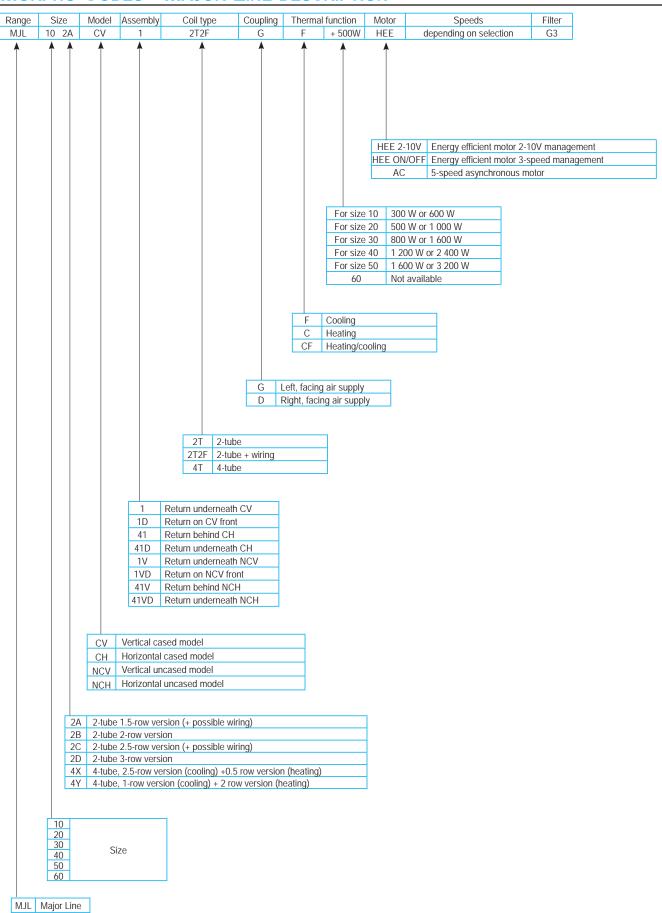
- The entire electrical connection part is encased in a housing. Access is only possible using a tool.
- No electrical terminals on the motor.
- Large size condensate pan to prevent water leaks and any damage to the building.
- Pan in ABS to eliminate the risk of corrosion present with metal pans and limit the creation of biofilm that causes the proliferation of bacteria.
- A tool must be used to access the inside of the unit. This prevents users from modifying the product or rearming the safety limiters contrary to specifications.
- The electrical unit has been sized to enable all types of controls to be fitted.
- For NCH, the condensate outlet has been raised 30 mm to facilitate the gravity drain.

LARGE SELECTION OF PART REFERENCES IN STOCK

- 22 basic sizes are stocked for 2-tube versions (right and left hydraulic access).
- 6 basic sizes are stocked for 4-tube versions.
- 8 basic sizes are stocked for 2-tube/2-wire versions.
- 2 versions are stocked: cased (CV and CH) and uncased (NCV and NCH).
- → Over 60 unit references in stock
- On/Off 2- and 4-way valve kits are also stocked to achieve configurations with control at very short notice.
- Additional references will progressively be added.



MORPHO CODES - MAJOR LINE DESCRIPTION



TECHNICAL DESCRIPTION

Frame

- Packaged chassis and side panels in ABS PC V0
- Front/rear panel in galvanised steel with mounting holes for easy fixing.

Casing

CV/CH models

Bi-material casing in two colours:

- Flange, side member and air supply grille in RAL 7035 grey ABS PC
- Front metal panel painted in RAL 9010 white and front mounted air return grille (1D, 41D) in RAL 7035 grey
- Central access point for housing the built-in thermostats

Water coil

- High performance coil concept
- Coil casing in galvanised panels.
- Copper tubes, continuous aluminium fins.
- Water coil tap on the left or right of the unit from the front of the air supply (to be specified when ordering)
- 2 or 4-tube main coil fitted with ½" or ¾" rotary couplings with air bleed valve and drain.
- Additional coil for 4 tubes fitted with ½" rotary couplings with 40 mm centre-to-centre distance.
- Nominal pressure of 16 bar (at 20°C)
- Test pressure: 24 bar.
- Max. water T°: 90°C
- Maximum hot water inlet temperature:
 - 4-tube application: 90°C
 - 2-tube application: 90°C
 - 2T/2-wire application: 55°C (min. air flow rate: 200 m³/h)

Electric heater

- Single tube 230V single phase 50/60 Hz electrical elements inserted into the aluminium housing.
- Two capillary tube temperature limiters with manual and automatic reset inserted in the aluminium housing.

Condensate drain pan

- ABS V0 pan
- Increased insulation for all climates, PSE panel (20 mm thick)
 M1 class
- ABS V0 auxiliary pan
- Condensate outlet raised Ø exterior 22 mm

Fan motor assembly

Fan(s)

Scroll(s) in ABS V0 in split units for total accessibility of the different parts of the fan motor assembly. 160 mm HEE impellers with airfoil blades (exclusive to CIAT) in self-extinguishing V0 ABS.

■ HEE motor

High energy efficiency motor enabling a reduction of up to 85% in electricity consumption.

- BLAC (Brushless Alternating Current) brushless technology offering more linear torque progression and a lower operating sound level than BLDC (Brushless Direct Current) technology.
- Sealed, tropicalised, with protected shaft
- 3-speed gradual operation by 0-10V or on/off control signal, without expansion board.
- Internal automatic overload protection as standard on winding.
- "DFS" motor fault output using a photocoupler for potential alarm feedback via a Konnex protocol communication bus (via the V3000 control).
- Mounted on anti-vibration mounts.
- Supply 230V±10%/1-Ph/50-60 Hz.

N.B.: the minimum voltage required for start-up of the motor is 2V.

or

Asynchronous motor

- 5 factory-fitted wired speeds (connected and available at the terminal) for customised adjustment.
- Sealed, tropicalised type, class F with protected shaft.
- Permanent capacitor.
- Ball bearings.
- Automatic overload protection as standard on winding.
- Resilient mounts.
- 230V single-phase 50/60 Hz power supply, reduced consumption.

Electrics box

- Unit incorporated into the side of the housing
- Entirely enclosed by a cover in ABS V0
- Terminal block on DIN rail in accordance with EN 50022 depth 7.5 mm
- Wire clamps for customer connection
- Unit opposite side to hydraulic connections (possibility of putting all on the same side optional with NCH)

Air filter

- Positioned at the air intake of the unit.
- Flexible filter medium made of regenerative polyester fibre.
- Efficiency class EN 779: G3.
- Fire resistance: M1.
- Rigid frame.
- Mounted on pivoting runners for easy maintenance.

Wiring diagrams

- 2-tube application: 7406955
- 2-tube application + C/O: 7406956
- 4-tube application: 7406957
- **2-tubes + 2-wire application ≤2000W**: 7406958
- 2-tubes + 2-wire application >2000W: 7406959

Packaging

 Delivered in individual boxes on pallets protected by stretch wrap film

Controls

- RTR-E electromechanical thermostat range.
- V30 electronic range
- V300 electronic range
- Networked electronic range (KNX): V3000
- Networked electronic range (LON): V-LON2

Accessories

- Factory-fitted:
- Condensate drain pump
- Rectangular air supply sleeve for direct distribution in soffit (optional).
- Delivered separately:

See accessories pages.

Option (contact us)

 Hydraulic coil with blades protected for harmful/corrosive atmospheres (coastal locations, or areas close to chemical industries).

N.B.: for more information, refer to the operator's manual.





EASY COMFORT SOLUTIONS

CASED MODEL







Advantages:

- · An attractive solution combining eco-design and cutting-edge technology
- The ideal solution for renovated premises without suspended ceilings.
- · Optimum air distribution ensures high quality comfort.

Models	CV: Cased Vertical CH: Cased Horizontal		
Main markets	Small businesses, Hotel chains, Residential		
Construction	New and Renovation		
Location	Visible on ceiling or below the windowsill		
Distribution	Integrated and optimised		
Variant	Air recovery underneath or front mounted		





The Cased Horizontal model is fitted in an overhang on the ceiling of the premises to be air conditioned. It is well suited to premises with insufficient space either under the windowsill or on the ground to fit a vertical model.



> CV model (Cased Vertical unit)

The Cased Vertical model is fitted to walls beneath windowsill level. This simple and elegant assembly is adapted to all premises, replacing the radiators, for example and requires no particular changes to be made to the room.

UNCASED MODEL

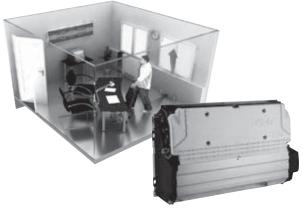




Advantages:

- · An economical solution
- · Simple to install using easy work coordination procedures
- This solution is extremely versatile with many optional accessories
- · Offers great flexibility with various grilles available to suit the architect's desian
- · The uncased model is the optimum solution for renovating installations with induction units

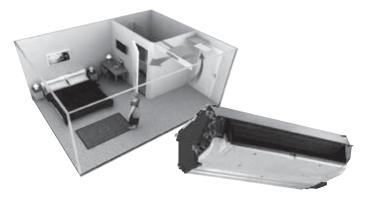
Models	NCV: Uncased Vertical NCH: Uncased Horizontal			
Main markets	Offices, Hotels			
Construction	Refurbishment/Renovation/Soffit			
Location	In suspended ceilings or in custom enclosures below the windowsill			



> NCV Model (Uncased Vertical unit)

The architect can integrate the Uncased Vertical model in a specific casing to blend in with other decorative elements of the premises.

The NCV model is specifically designed for renovation.



> NCH model (Uncased Horizontal unit)

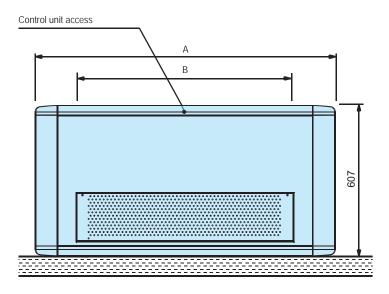
The Uncased Horizontal model is designed to be fitted into a suspended ceiling or soffit.

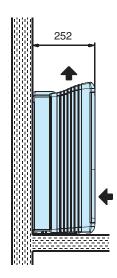
It is possible to connect a network of air distribution ducts to the supply air with the NCH model.

→ Available pressure up to 50 Pa

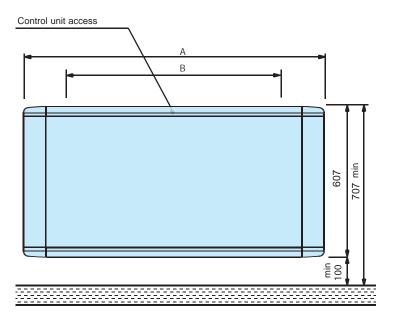
ASSEMBLY AND DIMENSIONS - CV MODEL (CASED VERTICAL)

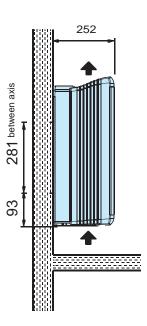
→ Assembly 1D: Unit with front mounted recovery





→ Assembly 1: Basic unit with bottom mounted recovery



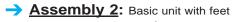


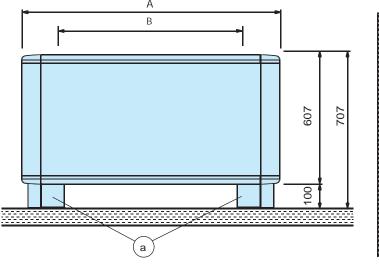
MAJOR LINE Sizes	Α	B between axis	Weight (kg) *
10	840	505	20
20	1000	665	23
30	1200	865	28
40	1400	1065	34
50	1600	1265	39
60	1800	1465	44

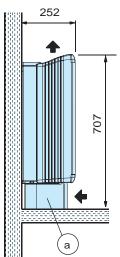
^{*} Weight of heaviest unit in 4-tube configuration



ASSEMBLY AND DIMENSIONS - CV MODEL (CASED VERTICAL)







Options available with assembly 2:

- Base mounted grille



- Rear skirting support



- Rear painted panel



- a Support feet
- b Aluminium indoor return air grille between feet
- c Painted rear skirting support
- j Rear painted panel RAL 7035

MAJOR LINE Sizes	A	B between axis	Weight (kg) *
10	840	505	21
20	1000	665	24
30	1200	865	29
40	1400	1065	35
50	1600	1265	40
60	1800	1465	45

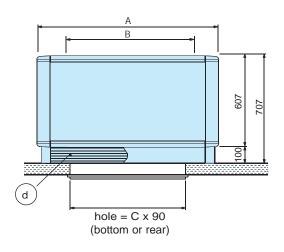
^{*} Weight of heaviest unit in 4-tube configuration

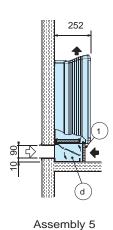
ASSEMBLY AND DIMENSIONS - CV MODEL (CASED VERTICAL)

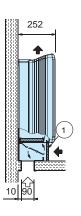
Assemblies 5 and 6:

Basic unit equipped with a manual pretreated air/recycled air mixing unit with a return air grille and a damper regulating the pretreated air intake.









Assembly 6

⇔ Air pretreated by an air handling unit

Accessories for assembly configurations (supplied separately)

d: Manually controlled int./ext. air recovery unit with return air grille (1) for filter removal

MAJOR LINE Sizes	Α	B between axis	C hole space	Weight (kg) *
10	840	505	430	24
20	1000	665	430	28
30	1200	865	780	32
40	1400	1065	780	40
50	1600	1265	1180	45
60	1800	1465	1180	50

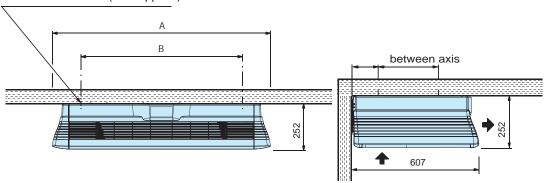
^{*} Weight of heaviest unit in 4-tube configuration



ASSEMBLY AND DIMENSIONS - CH MODEL (CASED HORIZONTAL)

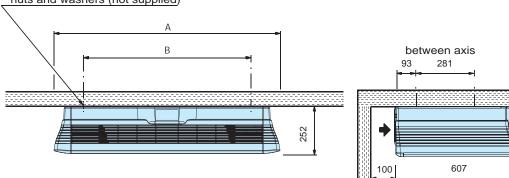
→ Assembly 41D: Unit with front mounted recovery

Mounting: 4 sealed M6 shafts, nuts and washers (not supplied)



Assembly 41: Basic unit

Mounting: 4 sealed M6 shafts, nuts and washers (not supplied)



Α

100 607 min	
B between axis	Weight (kg)*
505	20
665	23
865	28

MAJOR LINE Sizes

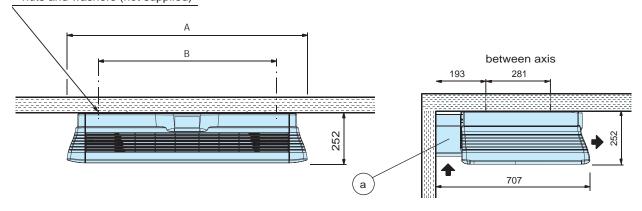
^{*} Weight of heaviest unit in 4-tube configuration

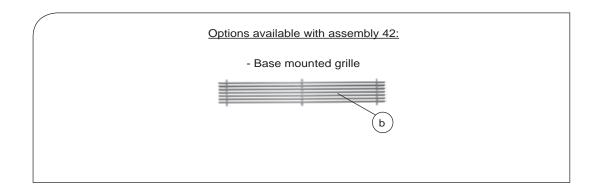


ASSEMBLY AND DIMENSIONS - CH MODEL (CASED HORIZONTAL)

-> Assembly 42: Basic unit with feet

Mounting: 4 sealed M6 shafts, nuts and washers (not supplied)





Accessories for assembly configurations (supplied separately)

- a Support feet
- b Aluminium internal return air grille between feet

Note: For assembly 42 the condensate drain pump must be used.

MAJOR LINE Sizes	А	B between axis	Weight (kg) *
10	840	505	21
20	1000	665	24
30	1200	865	29
40	1400	1065	35
50	1600	1265	40
60	1800	1465	45

^{*} Weight of heaviest unit in 4-tube configuration

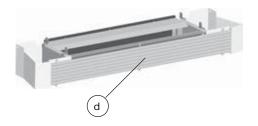


→ Comfort units

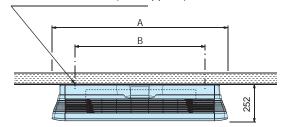
ASSEMBLY AND DIMENSIONS - CH MODEL (CASED HORIZONTAL)

Assemblies 45 and 46:

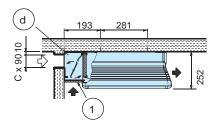
Basic unit equipped with a manual pretreated air/ recycled air mixing unit with a return air grille and a damper regulating the pretreated air intake.



Mounting: 4 sealed M6 shafts, nuts and washers (not supplied)



between axis



Assembly 46

Assembly 45 : identical with ceiling mounted fresh air intake

⇔ Air pretreated by an air handling unit

Accessories for assembly configurations (supplied separately)

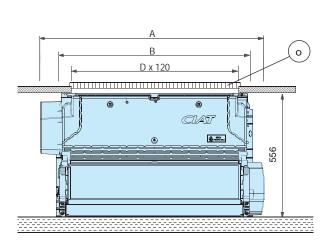
d Manually controlled int./ext. air recovery unit with return air grille 1 for filter removal

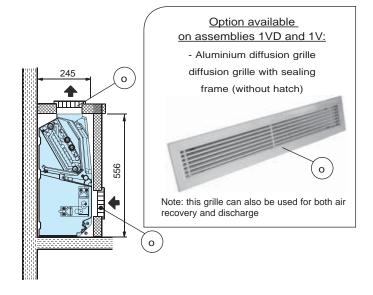
Note: For assemblies 45-46 the condensate drain pump must be used.					
MAJOR LINE Sizes	А	B between axis	C hole space	Weight (kg) *	
10	840	505	430	24	
20	1000	665	430	28	
30	1200	865	780	32	
40	1400	1065	780	40	
50	1600	1265	1180	45	
60	1800	1465	1180	50	

^{*} Weight of heaviest unit in 4-tube configuration

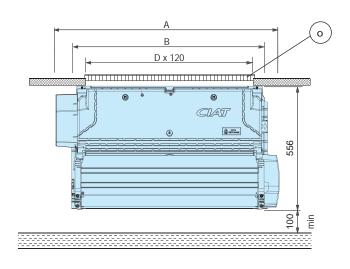
ASSEMBLY AND DIMENSIONS - NCV MODEL (UNCASED VERTICAL)

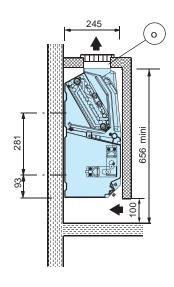
Assembly 1VD: Unit with front mounted recovery





→ Assembly 1V: Basic unit with bottom mounted recovery





Accessories for assembly configurations (supplied separately)

Aluminium single deflection diffusion or return air grille with sealing frame (without hatch). For other applications, please consult us.

MAJOR LINE sizes	Α	B between axis	D grille space	Weight (kg) *
10	652	505	355	15
20	812	665	515	18
30	1012	865	715	22
40	1212	1065	915	28
50	1412	1265	1115	32
60	1612	1465	1315	36

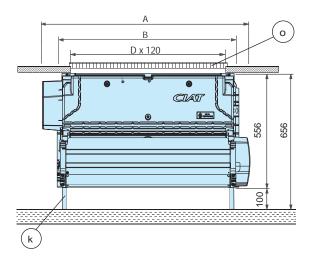
^{*} Weight of heaviest unit in 4-tube configuration

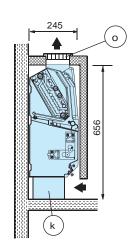


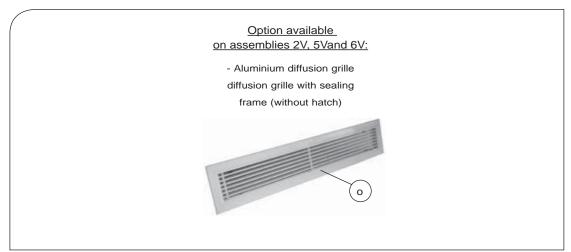
Comfort units

ASSEMBLY AND DIMENSIONS - NCV MODEL (UNCASED VERTICAL)

→ Assembly 2V: Basic unit with support base







- k Support base
- o Aluminium single deflection diffusion or return air grille with sealing frame (without hatch). For other applications, please consult us.

MAJOR LINE sizes	Α	B between axis	D grille space	Weight (kg) *
10	652	505	355	15
20	812	665	515	18
30	1012	865	715	22
40	1212	1065	915	28
50	1412	1265	1115	32
60	1612	1465	1315	36

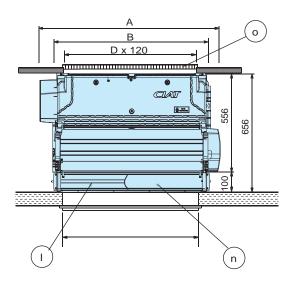
^{*} Weight of heaviest unit in 4-tube configuration

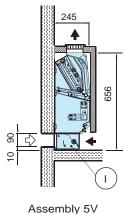
ASSEMBLY AND DIMENSIONS - NCV MODEL (UNCASED VERTICAL)

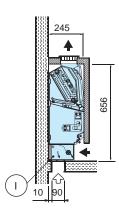
→ Assemblies 5V and 6V:

Basic unit equipped with a manual pretreated air/recycled air mixing unit with a return air grille and a damper regulating the pretreated air intake.









embly 5V Assembly 6V

 $\ \, \circlearrowleft \,$ Air pretreated by an air handling unit

- k Support base
- I Internal/external manually controlled air recovery unit
- o Aluminium single deflection diffusion or return air grille with sealing frame (without hatch). For other applications, please consult us.

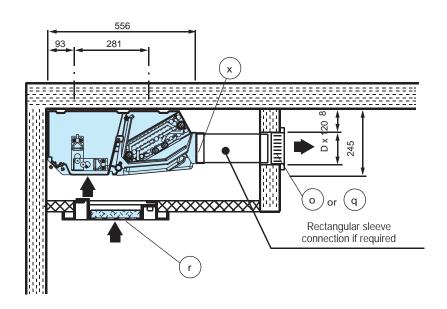
MAJOR LINE sizes	А	B between axis	C hole space	D grille space	Weight(kg) *
10	652	505	430	355	16,5
20	812	665	430	515	20
30	1012	865	780	715	25
40	1212	1065	780	915	32
50	1412	1265	1180	1115	37
60	1612	1465	1180	1315	42

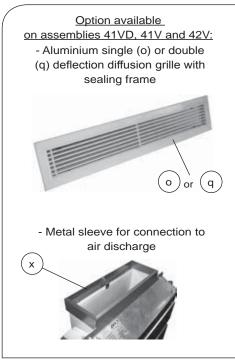
^{*} Weight of heaviest unit in 4-tube configuration



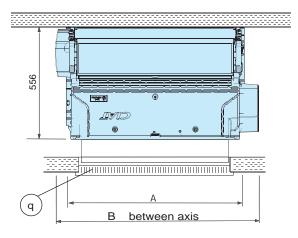
ASSEMBLY AND DIMENSIONS - NCH MODEL (UNCASED HORIZONTAL)

→ Assembly 41VD: Unit with front mounted recovery









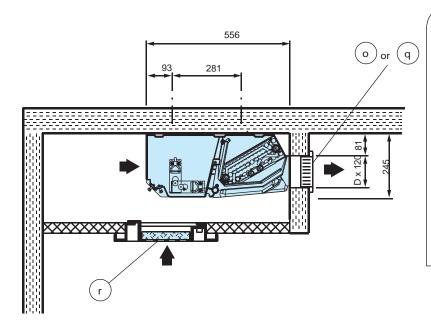
- o Aluminium single deflection diffusion or return air grille with sealing frame (without hatch). For other applications, please consult us.
- q Aluminium double deflection diffusion grille with sealing frame
- r 600x600 microperforated return grille
- x Metal sleeve connecting rectangular sleeve to supply air

MAJOR LINE sizes	А	B between axis	D grille space	Weight (kg) *
10	652	505	355	15
20	812	665	515	18
30	1012	865	715	22
40	1212	1065	915	28
50	1412	1265	1115	32
60	1612	1465	1315	36

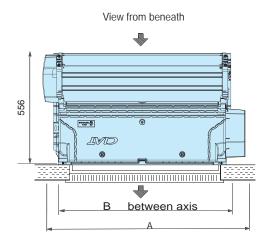
^{*} Weight of heaviest unit in 4-tube configuration

ASSEMBLY AND DIMENSIONS - NCH MODEL (UNCASED HORIZONTAL)

→ Assembly 41V: Basic unit with rear mounted recovery







- Aluminium single deflection diffusion or return air grille with sealing frame (without hatch). For other applications, please consult us.
- q Aluminium double deflection diffusion grille with sealing frame
- r 600x600 microperforated return grille

MAJOR LINE sizes	А	B between axis	D grille space	Weight (kg) *
10	652	505	355	15
20	812	665	515	18
30	1012	865	715	22
40	1212	1065	915	28
50	1412	1265	1115	32
60	1612	1465	1315	36

^{*} Weight of heaviest unit in 4-tube configuration

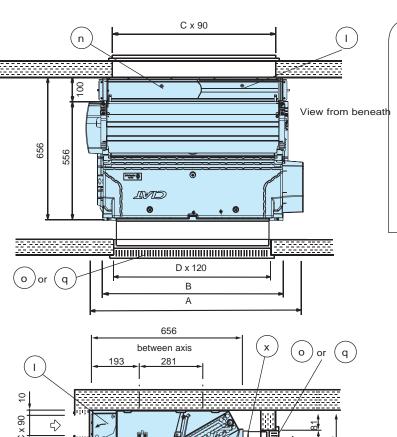


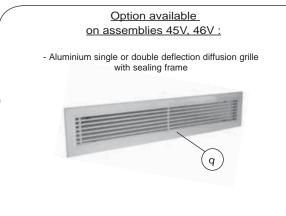
ASSEMBLY AND DIMENSIONS - NCH MODEL (UNCASED HORIZONTAL)

Assemblies 45V and 46V:

Basic unit equipped with a manual pretreated air/recycled air mixing unit with a return air grille and a damper regulating the pretreated air intake.







 \diamondsuit Air pretreated by an air handling unit

r

Accessories for assembly configurations (supplied separately)

- I Internal/external manually controlled air recovery unit
- o Aluminium single deflection diffusion grille with sealing frame
- q Aluminium double deflection diffusion grille with sealing frame
- r 600x600 microperforated return grille

Rectangular sleeve connection if required

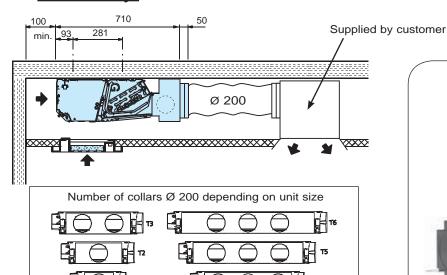
x Metal sleeve connecting rectangular sleeve to supply air

MAJOR LINE sizes	Α	B between axis	C hole space	D grille space	Weight (kg) *
10	652	505	430	355	16,5
20	812	665	430	515	20
30	1012	865	780	715	25
40	1212	1065	780	915	32
50	1412	1265	1180	1115	37
60	60 1612		1180	1315	42

^{*} Weight of heaviest unit in 4-tube configuration

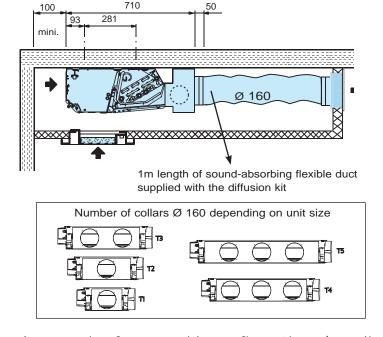
ASSEMBLY AND DIMENSIONS - NCH MODEL (UNCASED HORIZONTAL)

→ Y assembly:

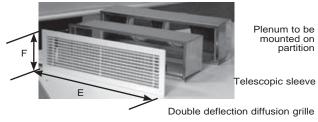




→ Montage YK:



DIFFUSION KIT FOR YK ASSEMBLY:



Accessories for assembly configurations (supplied separately)

Pre-punched Ø 200

M01 Smooth fresh air supply sleeve alone (external Ø: 100 mm), screws and bolts supplied separately

MAJOR LINE	Δ.	В	Е	F	Number	of collars	Mainht (km) *
sizes	А	between axis	overall length	overall height	Υ	YK	Weight (kg) *
10	652	505	430	180	1	1	16,5
20	812	665	430	180	1	1	20
30	1012	865	630	180	2	2	25
40	1212	1065	830	180	2 (3)	3	32
50	1412	1265	830	180	3	3	37
60	1612	1465			3		42

^{*} Weight of heaviest unit in 4-tube configuration



PERFORMANCE - 2 TUBE SYSTEM

Cold water temperature: 7/12°C, Summer air temperature: 27°C 19° (BH) - Hot water temperature: 50°C, Winter air temperature: 20°C.

Major Line	Motor code	Air flow	0.	oower (W)	Heating capacity	Sound power LW	Comfort level	Aι	erage air temp exiliary electri eistor	c heater 230/1	
LIIIC	code	(m ³ /h)	Total	Sensible	W	dB(A)	ISO or NR	(W)	(°C)	(W)	(°C)
	V5	300	1 200	1 070	1 780	49	34		3,0		5,9
	V4	255	1 050	923	1 580	46	30		3,5		7,0
102A	V3	220	920	804	1 380	42	25	300	4,1	600	8,1
	V2	190	799	695	1 180	39	22		4,7		9,4
	V1	165	705	611	1 060	36	18		5,4		10,8
	V5	280	1 520	1 230	2 000	49	33		3,2		6,4
	V4	245	1 350	1 080	1 780	46	30		3,6		7,3
102C	V3	200	1 130	900	1 460	42	26	300	4,5	600	8,9
	V2	180	1 020	810	1 310	40	23		5,0		9,9
	V1	145	854	674	1 110	37	20		6,1		12,3
	V5	520	2 000	1 840	2 990	54	38		2,9		5,7
	V4	430	1 790 1 630	1 610 1 450	2 630	49	33		3,5		6,9
202A	V3	385	1 440	1 270	2 410	46	29	500	3,9	1000	7,7
	V2 V1	320 255	1 240	1 070	2 110 1 770	42 37	25 19		4,6 5,8		9,3 11,6
	V5	495	2 570	2 180	3 610	55	39		3,0		6,0
	V3	495	2 200	1 840	3 060	50	33		3,7		7,3
202C	V3	355	1 970	1 630	2 730	46	29	500	4,2	1000	8,4
.020	V2	300	1 680	1 380	2 310	43	27		5,0	1000	9,9
	V1	240	1 400	1 140	1 910	38	22		6,2		12,4
	V5	495	2 820	2 270	3 790	55	39				
	V4	405	2 450	1 950	3 260	50	33				
202D	V3	355	2 190	1 730	2 820	46	29				
	V2	300	1 850	1 450	2 300	43	27				
	V1	240	1 550	1 190	1 910	38	22		ı	ı	
	V5	840	2 900	2 820	4 800	56	40		2,8		5,7
	V4	710	2 640	2 550	4 190	53	37		3,3		6,7
302A	V3	565	2 320	2 190	3 490	47	30	800	4,2	1600	8,4
	V2	405	1 700	1 540	2 540	39	22		5,9		11,7
	V1	250	1 110 3 620	987 3 150	1 610	27	<15		9,5		19,0
	V5	840	3 250	2 780	5 130	56	40				
302B	V4 V3	710 565	2 840	2 280	4 580 3 780	53 47	37 30				
0UZB	V3 V2	405	2 060	1 650	2 860	39	22				
	V2 V1	250	1 270	973	1 260	27	<15				
	V5	785	4 130	3 430	5 820	56	41		3,0		6,1
	V4	675	3 700	3 020	5 130	53	37		3,5	•	7,0
302C	V3	550	3 180	2 550	4 310	47	30	800	4,3	1600	8,6
	V2	385	2 330	1 800	3 100	40	23		6,2		12,3
	V1	210	1 390	1 000	1 780	28	<15		11,3		22,6
	V5	1105	5 480	4 690	7 850	61	44		3,2		6,5
	V4	1025	5 240	4 460	7 410	60	43		3,5		7,0
102C	V3	825	4 560	3 770	6 250	54	36	1200	4,3	2400	8,6
	V2	655	3 880	3 110	5 200	49	30		5,4		10,9
	V1	475	3 030	2 330	3 940	42	22		7,5		15,0
	V5	1230	6 510	5 420	8 930	62	45		3,9		7,7
	V4	1125	6 110	5 020	8 310	61	43		4,2		8,4
02C	V3	920	5 270	4 220	7 030	55	37	1600	5,2	3200	10,3
	V2	760	4 560	3 580	5 980	50	31		6,3		12,5
	V1	530	3 430	2 610	4 370	43	23		9,0		17,9
	V5	1420	7 520 7 110	6 360 5 940	10 900	64	46				
.030	V4	1300	6 560	5 940	10 200	62	44				
602D	V3	1150	5 690	4 550	9 250	59	40				
	V2 V1	935 675	4 470	3 450	7 820 5 920	54 48	34 28				

Basic standard speeds



Table with hypothetical acoustic attenuation of the room and installation for 2-tube system from previous page:

CV/CH/NCV models:

12dB: Sizes 102A, 102C, 202A, 202C, 202D, 302A, 302B, 302C

14dB: Sizes 402C, 502C

15dB: Size 602D

NCH models:

14dB: Sizes 102A, 102C, 202A, 202C, 202D, 302A, 302B, 302C

16dB: Sizes 402C, 502C, 602D

(1) Important: the supply air temperature should not exceed 65°C (CIAT recommendation).

PERFORMANCE - 4 TUBE SYSTEM

Cold water temperature: 7/12°C, Summer air temperature: 27°C 19° (BH) - Hot water temperature: 70/60°C, Winter air temperature: 20°C.

				capacity				
Major Line	Motor code	Air flow rate (m ³ /h)	(V Total	V) Sensible	Heating capacity W	Sound power LW dB(A)	Comfort level ISO or NR	
	V5	280	1 520	1 230	1 480	49	33	
	V4	245	1 350	1 090	1 380	46	30	
104X	V3	200	1 130	902	1 230	42	26	
	V2	180	1 020	812	1 150	40	23	
	V1	145	852	676	1 020	37	20	
	V5	495	2 570	2 170	2 470	55	39	
	V4	405	2 200	1 830	2 260	50	33	
204X	V3	355	1 970	1 620	2 110	46	29	
	V2	300	1 680	1 370	1 910	43	27	
	V1	240	1 400	1 130	1 700	38	22	
	V5	785	4 130	3 440	3 800	56	41	
	V4	675	3 700	3 070	3 540	53	37	
304X	V3	550	3 180	2 600	3 210	47	30	
	V2	385	2 330	1 810	2 630	40	23	
	V1	210	1 390	1 010	1 800	28	<15	
	V5	1105	5 480	4 700	5 140	61	44	
	V4	1025	5 240	4 430	4 980	60	43	
404X	V3	825	4 560	3 750	4 510	54	36	
	V2	655	3 880	3 120	4 040	49	30	
	V1	475	3 030	2 360	3 380	42	22	
	V5	1230	6 510	5 430	6 120	62	45	
	V4	1125	6 110	5 030	5 870	61	43	
504X	V3	920	5 270	4 240	5 330	55	37	
	V2	760	4 560	3 590	4 840	50	31	
	V1	530	3 430	2 620	3 950	43	23	
	V5	1420	7 630	6 220	7 310	64	46	
	V4	1300	7 180	5 800	7 030	62	44	
604X	V3	1150	6 570	5 240	6 630	59	40	
	V2	935	5 650	4 410	5 960	54	34	
	V1	675	4 380	3 340	4 950	48	28	

Basic standard speeds

Table with hypothetical acoustic attenuation of the room and the installation:

CV/CH/NCV models:

12dB: Size 104X, 204X, 304X 14dB: Size 404X, 504X 15dB: Size 604X

NCH models:

14dB: Size 104X, 204X, 304X 16dB: Size 404X, 504X, 604X



Comfort units

CIAT - MAJOR LINE CONTROL RANGE

V3000 KNX PID "networked" control

The excellence of networked systems

- > Networked system based on the KNX communications protocol (international standard).
- > Modulating control of valve(s) and electric heater (2-tube/2-wire version).
- > Automatic or manual control.
- > Various control units with discreet and intuitive ergonomic design are available.
- > Radiofrequency remote control.
- > Modulating control of the ventilation with HEE motor (optional).

Option for control by networked PID also available with LON protocol (contact us)



with potentiometer

Factory-fitted flush-mounted terminal

Available 1st quarter 2015

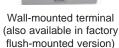


V300

PI Control

Simplified performance

> Technology that makes it possible to control several units with a single terminal (suites, conference rooms, landscape offices, etc.).



V30

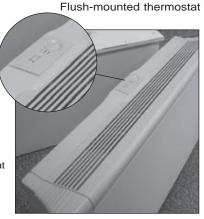
Electronic On/Off control

Individualised performance

- > A single electronic terminal that meets all individual control needs.
- > The accuracy of electronic control programmable on-site with switches.
- > Management of a window switch for energy savings.
- > 3 manually selected ventilation speeds.
- > Control of ventilation or valve(s).



Wall-mounted thermostat with potentiometer





RTR - E

Electromechanical On-Off control

Absolute simplicity

The robustness of an electromechanical thermostat with three manual fan speeds.

Valves

Valve kits supplied separately

Quick on-site installation

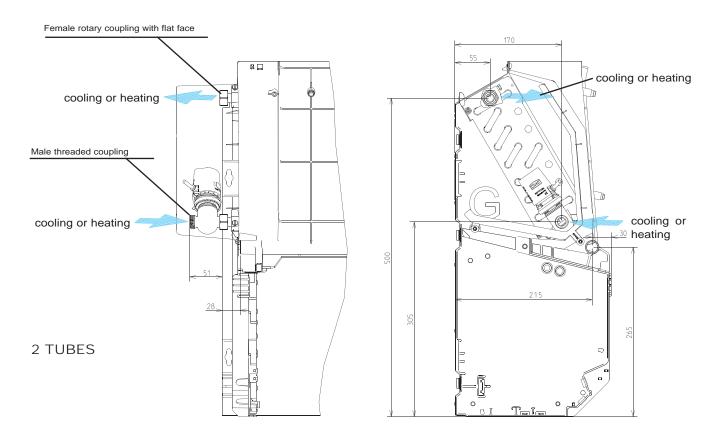
> Valve kits for each application (2 or 4-tube coils and thermal on/off 230V 2 or 3-way valves) available in stock.

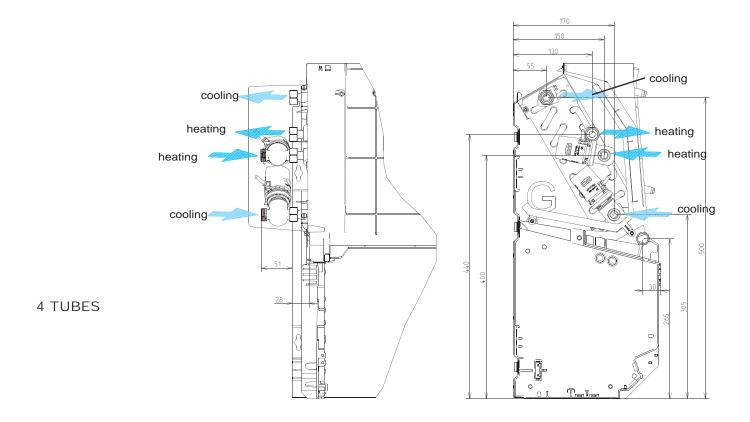




HYDRAULIC CONNECTIONS WITH FITTED VALVES

With assembly of 2-way valves

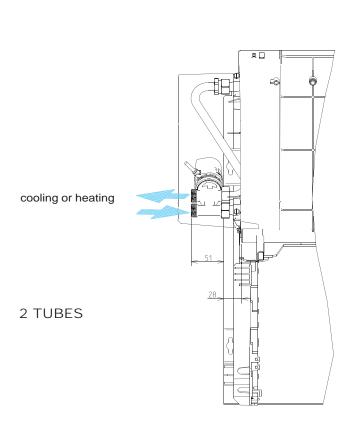


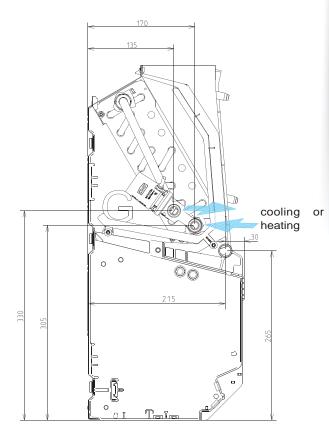


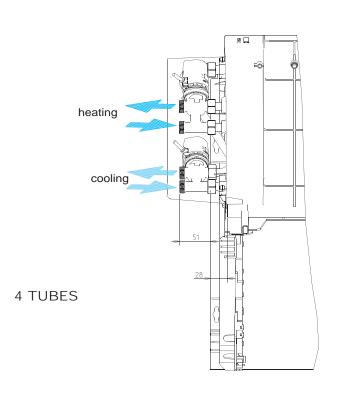


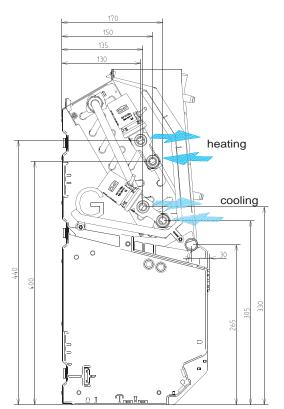
HYDRAULIC CONNECTIONS WITH FITTED VALVES

With 3-way valves + by-pass fitted (distance between axes 40 mm)



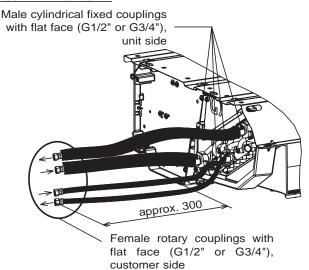






FLEXIBLE COUPLING KIT (OPTIONAL) WITH VALVES OR ON THE UNIT - NCH/NCV

ASSEMBLY ON UNIT



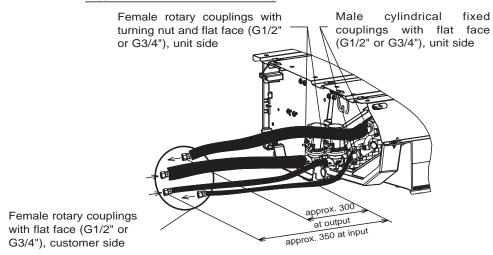
TECHNICAL DESCRIPTION

- Machined brass coupling unless otherwise specified Thread and internal thread in line with standards NFE 03-004 and NFE 03-005
- Pipe in EPDM elastomer in line with EN 684-1 and AISI 304 stainless steel sheath
- Stainless steel crimped bush between coupling and tube + sheath

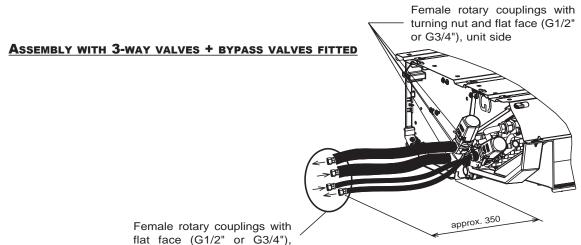
Only on cold insulated

- Heat insulating sheath in M1 cellular foam (9 mm thick) glued at each end to the crimping bush
- flexible couplings
- -- Protective end-piece glued at each end to the heat insulating sheath
- DN corresponds to the pipe's internal diameter
- Min./max. operating temperature = 6°C to 110°C
- Max. operating pressure 110°C, 10 bars

ASSEMBLY WITH 2-WAY VALVES



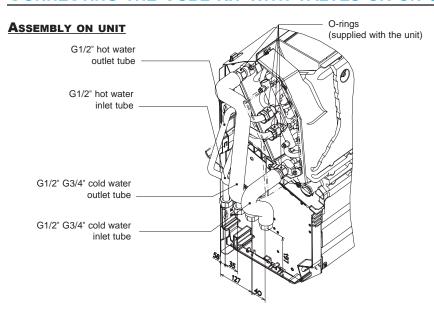
customer side



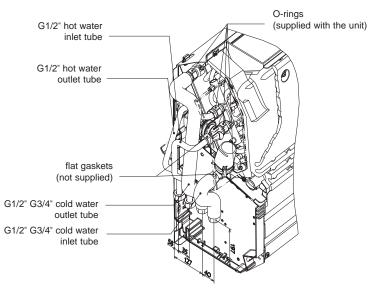
26

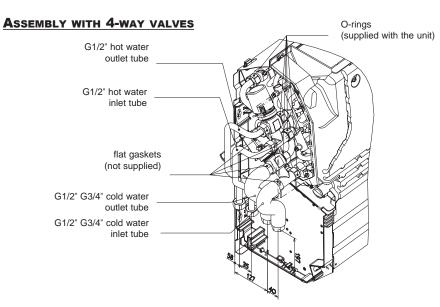


CONNECTING THE TUBE KIT WITH VALVES OR ON UNIT - CV/CH



ASSEMBLY WITH 2-WAY VALVES

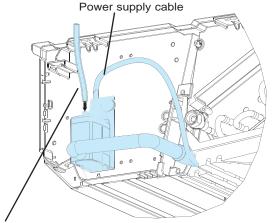






TECHNICAL CHARACTERISTICS

Condensate drain pump



The pump outlet must be connected to the water pipe with a flexible tube of 6 mm internal diameter not supplied.

Technical characteristics

Maximum flow rate	20 l/h
Maximum discharge height	10 m (flow rate = 4l/h)
Maximum pressure	14 m (flow rate = 0l/h)
Sound level at 1 m as per EN ISO 3744 (Measurements made at the LNE metrology lab, pump in water, outside of application)	23 dBA
Sound level within application at 1 m: (Measurements made in the Sauermann acoustic lab, pump in water)	< or = 28 dBA
Power supply	230 V - 50/60 Hz - 14 W
Insulation class	Double insulation
Detection levels	ON: 18 mm, OFF: 12 mm, AL: 21 mm
Safety contact	NF 8 A resistive - 250 V
Heat protection (overheating)	90°C (automatic restart)
Operating cycle	30%: 3s ON - 7s OFF
Protection	IP54
Safety standard	CE
RoHS Directive	Compliant
DEEE Directive	Compliant
Packaging	0.390 kg - L 112 x W 91 x H 91 mm
Masterpack	25 pieces

Electrical specifications of motors

			A	C Asynchr	onous Mot	or			l	HEE Brush	less moto	r	
MAJOR LINE	Motor speed	102/104	202/204	302/304	402/404	502/504	602/604	102/104	202/204	302/304	402/404	502/504	602/604
	V5	33	58	88	106	108	135	11	25	32	77	90	100
Absorbed	V4	31	41	67	93	94	114	9	15	22	63	80	75
power during operation	V3	29	36	52	80	79	99	6	11	13	36	42	55
(W)	V2	27	31	42	72	72	88	5	8	7	21	26	32
. ,	V1	26	27	35	63	63	77	4	5	3	11	13	16
	V5	0.14	0.25	0.38	0.46	0.47	0.59	0.11	0.20	0.29	0.62	0.71	0.74
	V4	0.13	0.18	0.29	0.40	0.41	0.50	0.09	0.13	0.20	0.50	0.62	0.67
Max. absorbed current (A)	V3	0.13	0.16	0.23	0.35	0.34	0.43	0.07	0.11	0.13	0.30	0.35	0.44
current (A)	V2	0.12	0.13	0.18	0.31	0.31	0.38	0.06	0.09	0.08	0.19	0.21	0.27
	V1	0.11	0.12	0.15	0.27	0.27	0.33	0.06	0.06	0.06	0.11	0.13	0.16

CONDITIONS: Maximum values with outlet open; Supply voltage 230V ± 10% / 50-60Hz



The name plate is located on the condensate pan, on the electrical connection side

Coil capacity (litres)

MAJOR LINE		102A	102C	202A	202C	202D	302A	302B	302C	402C	502C	602D
2-tube system	Hot or cold water coil	0.358	0.592	0.478	0.792	0.95	0.628	0.835	1.042	1.292	1.542	3.846
Major Line		10	4X		204X			304X		404X	504X	604X
4 tube ovetem	Cold water coil	0.5	592		0.792			1.042		1.292	1.542	3.206
4-tube system	Hot water coil	0.1	0.123		0.163		0.213			0.263	0.313	0.646

Diameters of coil couplings

- Type of coil couplings: rotary couplings with flat face;Type of valve couplings: threaded male couplings must be provided.

MAJOR	RLINE		102A	102C	202A	202C	202D	302A	302B	302C	402C	502C	602D
2-tube s	system	Hot or cold water coil	G1/2"	G3/4"	G3/4"								
MAJOR	R LINE		104X			204X			304X		404X	504X	604X
4 tuba a		Cold water coil	G1/2"			G1/2"		G1/2"			G1/2"	G3/4"	G3/4"
4-tube s	4-tube system	Hot water coil	G1	G1/2"		G1/2"		G1/2"			G1/2"	G1/2"	G1/2"



ACCESSORIES (FITTED TO UNIT)

CV/CH	NCV/ NCH	Assembly	Figures	Assembly markings and dimensions	Description
•	•	All	G		Condensate drain pump fitted to unit with high safety device
	•	41V, 45V, 46V, 47V, 48V, 41VD	91	x	Metal sleeve for connection to air discharge
	•	NCH only	0		Hydraulic and electrical connections on same side

ACCESSORIES (SUPPLIED SEPARATELY)

	NCV/ NCH	Assem- blies	Figures	Assembly markings and dimen- sions	Description		102-104	202-204	302-304	402-404	502-504	602-604
•		2, 42		a	Support feet for cased model	Code		7242933				
•		2, 42		b	Internal return air grille between feet	Code	7242935	7242936	7242937	7242938	7242939	7242940
•		2		С	Rear skirting support in RAL7035 light grey, 55 mm thick (for 70 mm skirting)	Code	7242926	7242927	7242928	7242929	7242930	7242931
•		2		j	Rear panel painted in RAL7035	Code	7262703	7262704	7262705	7262706	7262707	7262708
•		5/6, 45/46		d	Manual internal/external air recovery unit with return air grille	Code	7242949	7242950	7242951	7242952	7242953	7242954
	•	2V		k	Support base for uncased unit	Code			724.	2932		



ACCESSORIES (SUPPLIED SEPARATELY)

CV/ CH	NCV/ NCH	Assem- blies	Figures	Assembly markings and dimensions	Description			102-104	202-204	302-304	402-404	502-504	602-604
	•	5V/6V, 45V/46V		I	Manual internal/external air recovery unit		Code	7242956	7242957	7242958	7242959	7242960	7242961
	•	All		0	Single deflection diffusion grille with sealing frame for vertical and horizontal models		Code	7256897	7256898	7256899	7256900	7256901	7256902
	•	41V, 42V, 45V/46V, 45/46VS, 47V/48V, 41VD		q	Double deflection diffusion grille with sealing frame for horizontal models		Code	7242942	7242943	7242944	7242945	7242946	7242947
	•	Υ	000	V	Supply plenum with collars Ø 200 mm		Code	7242991	7242992	7242993	7242994	7242995	7242996
	•	YK	00	w	Supply plenum with Ø 160 mm collars + air diffusion grille +1 m sheath		Code				7243489 E046191		
•	•	All			Condensate drain pump to be fitted to unit with high safety device.		Code			720.	3415		
	•	All			Resilient mounts supplied separately (4 per unit)		Code			021:	9453		
	•	Υ		M01	Smooth sleeve alone (external Ø 100 mm), screws and bolts supplied separately		Code			701.	3442		
	•	Y		M07	Assembly comprising Ø100 external diameter collar* with auto-adjustable module fitted with a seal. Packaged with screws, bolts and plan. The flow regulator is designed to supply the determined flow** with a pressure difference of between 50 and 100 Pa.	15/30/45 m ³ /h	Code			701.	3440		



→ Comfort units

Flexible connections for Horizontal/Vertical chassis models

Assem- bly	Figures	Description		102A-102C-202A-202C-202D- 302A-302B-302C-402C	502C-602D
		For 2-tube coils	G1/2" customer side coupling	G3/4" customer side coupling	
All Without Valve		2 M1 9 mm thick insulated flexible connections EPDM pipe+PN10 stainless steel braid length 300 mm Male coupling with flat end/Female rotary coupling on customer side	Code	2 x 5202288	2 x 7247867
All 4-way valve		2 M1 9 mm thick insulated flexible connections EPDM pipe+PN10 stainless steel braid length 300 mm Female rotary couplings	Code	2 x 5202289	2 x 5202298
All 2-way valve		2 M1 9 mm thick insulated flexible connections EPDM pipe+PN10 stainless steel braid length 300 mm, including: 1 Male coupling with flat end/Female rotary coupling on customer side 1 Female rotary coupling	Code	5202288 + 5202289	7247867 + 5202298
Assem- bly	Figures	Description		104X-204X- 304X-404X	504X-604X
		For 4-tube coils		Customer side coupling Heating G1/2" - Cooling G1/2"	
All Without Valve		For 4-tube coils 4 EPDM pipe+PN10 stainless steel braid length 300 mm flexible connections Male coupling with flat end/ Female rotary coupling on customer side HEATING: 2 non-insulated COOLING: 2 M1 9 mm thick insulated	Code		
Without		4 EPDM pipe+PN10 stainless steel braid length 300 mm flexible connections Male coupling with flat end/ Female rotary coupling on customer side HEATING: 2 non-insulated		Heating G1/2" - Cooling G1/2" HEATING: 2 x 7247868 COOLING:	Heating G1/2" - Cooling G3/4" HEATING: 2 x 7247868 COOLING:

Tubes for Horizontal/Vertical cased models

Assem- bly	Figures	Description	Code	102A to 102D - 202A to 202D - 302A to 302D - 402A and 402C	402B and 402D - 502A to 502D - 602B to 602D
		For 2-tube coils	G1/2" customer side coupling	G3/4" customer side coupling	
All Without valve	~	2 M1 9 mm thick insulated tubes Copper tube Ø 12.7 - PN 16 Male coupling with flat end/Female rotary coupling on customer side	Code	7299040 (L/R)* 7299041 (L) + 7299064 (R)	7299059 (L/R)* 7299061 (L) + 7299071 (R)
All 4-way valve	,	2 M1 9 mm thick insulated tubes Copper tube Ø 12.7 - PN 16 Female rotary couplings	Code	7299049 (L/R) 7299050 (L/R)	7299063 (L/R) 7299062 (L/R)"
All 2-way valve	1	2 M1 9 mm thick insulated tubes Copper tube Ø 12.7 - PN 16 1 Male coupling with flat end/Female rotary coupling on customer side 1 Female rotary coupling	Code	7299049 (L/R) 7299041 (L) + 7299064 (R)	7299062 (L/R) 7299061 (L) + 7299071 (R)
Assem- bly	Figures	Description		204X - 304X - 404X	504X - 604X
		For 4-tube coils	Customer side coupling Heating G1/2" - Cooling G1/2"	Customer side coupling Heating G1/2" - Cooling G3/4"	
All Without Valve	>	4 copper tubes Ø 12.7 - PN 16 Male coupling with flat end/Female rotary coupling on customer side HEATING: 2 non-insulated COOLING: 2 M1 9 mm thick insulated	Code	7299066 (R) + 7299065 (R) COOLING: 7299040 (L/R)	HEATING: 7299048 (L) + 7299046 (L) 7299066 (R) + 7299065 (R) COOLING: 7299059 (L/R) 7299061 (L) + 7299071 (R)
All 4-way valve	1	4 copper tubes Ø 12.7 - PN 16 Female rotary couplings HEATING: 2 non-insulated COOLING: 2 M1 9 mm thick insulated	Code	HEATING: 7299054 (L) + 7299051 (L) 7299070 (R) + 7299068 (R)	HEATING: 7299054 (L) + 7299051 (L) 7299070 (R) + 7299068 (R) COOLING: 299063 (L/R) 7299062 (L/R)
All 2-way valve	•	4 copper tubes Ø 12.7 - PN 16 - including: 1 Male coupling with flat end/Female rotary coupling on customer side 1 Female rotary coupling HEATING: 2 non-insulated COOLING: 2 M1 9 mm thick insulated	Code	HEATING: 7299051 (L) + 7299048 (L) 7299068 (R) + 7299066 (R) COOLING: 7299049 (L/R)	HEATING: 7299051 (L) + 7299048 (L) 7299068 (R) + 7299066 (R) COOLING: 7299062 (L/R) 7299061 (L) + 7299071 (R)

^{* (}L) : Left / (R) : Right





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