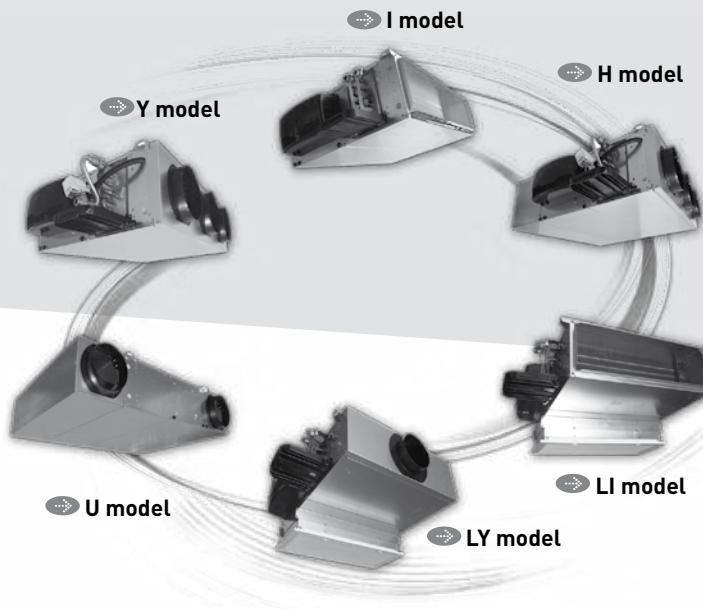


COMFORT LINE

Comfort units
Ductable

*Comfort unit with high available static pressure
Modular air discharge configurations
Flexible installation
Excellent acoustic comfort*



COMFORT LINE

With the new ductable type Comfort Unit, CIAT is strengthening its strategy of sustainable development and providing solutions that meet the latest requirements in terms of comfort, energy optimisation and quality for interior environments.

Integrating the latest technical developments, **Comfort Line** is the customisable solution designed to provide summer and winter comfort for occupants of new and renovated buildings.

Easy to install, COMFORT LINE is available in 7 frame sizes and comes in 4 thicknesses: 215, 240, 245, 280 and 375 mm, enabling perfect integration into all types of suspended ceilings.

For total flexibility and adaptability, COMFORT LINE is available in several assembly versions: I, Y, H, H Compact, U, U Compact, LI and LY.

In the HEE version (High Energy Efficiency), COMFORT LINE, not only provides energy savings of up to 85%, but also meets the strict requirements of thermal regulations such as RT 2012 in France. Furthermore, COMFORT LINE complies with the ErP 2015 directive.

In conjunction with Epure technology, COMFORT LINE treats particle pollution. The EPURE solution guarantees excellent indoor air quality and ensures a PM2.5 particulate concentration below the limit recommended by the WHO ($10 \mu\text{g}/\text{m}^3$).

RANGE

The COMFORT LINE range comprises 7 sizes covering a large scope of air flow rates, and comes in 10 models to provide great flexibility in terms of suspended ceiling configurations.

COMFORT LINE is available as:

- A 2-tube system, with heating or cooling mode.
- A 2-tube + 2-wire system, with cooling + electric mode or heating/cooling + electric mode.
- A 4-tube system, with heating and cooling mode.

RANGE CONFIGURATION

Linear concepts

I MODEL

- Smooth metal rectangular sleeve mounted on the air supply, except for size 0.
- Smooth metal rectangular sleeve on the intake (option).



Y MODEL

- Supply plenum with collars for circular duct
 - *Size 0 and 1: 1 Ø200 collar or 1 Ø160 collar, or 2 Ø200 collars or 2 Ø160 collars
 - *Size 2: 2 Ø200 collars or 2 Ø160 collars
 - *Size 3: 3 Ø200 collars or 3 Ø160 collars
 - *Size 4: 3 Ø200 collars or 2 Ø250 collars
 - *Size 5: 4 Ø200 collars or 3 Ø250 collars
 - *Size 6: 5 Ø200 collars or 4 Ø250 collars
- Smooth metal rectangular sleeve on the intake (option).



H MODEL

- Return plenum and supply plenum with collars for circular duct
 - *Size 0 and 1: 1 Ø200 collar or 1 Ø160 collar, or 2 Ø200 collars or 2 Ø160 collars
 - *Size 2: 2 Ø200 collars or 2 Ø160 collars
 - *Size 3: 3 Ø200 collars or 3 Ø160 collars
 - *Size 4: 3 Ø200 collars or 2 Ø250 collars
 - *Size 5: 4 Ø200 collars or 3 Ø250 collars
 - *Size 6: 5 Ø200 collars or 4 Ø250 collars



H COMPACT MODEL

- Versions without filter for sizes 0 to 4

U MODEL

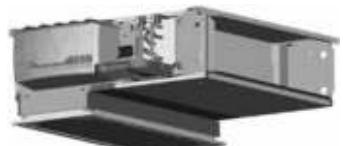
- Return plenum and supply plenum with Ø 200 (size 0 to 3) or 250 mm (size 4) lateral collars.



L concepts

LI MODEL (sizes 1 to 4)

- Air recovery grille integrated into the unit, with air supply via rectangular sleeve



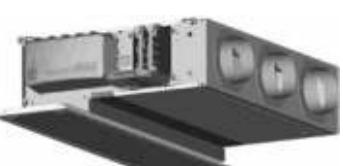
LIK MODEL (sizes 1 to 4)

- Air recovery grille integrated into the unit, with air supply via air distribution kit: grille + counter frame



LY MODEL (sizes 1 to 4)

- Air recovery grille integrated into the device, with air supply via Ø160 mm or Ø200 mm circular collars.



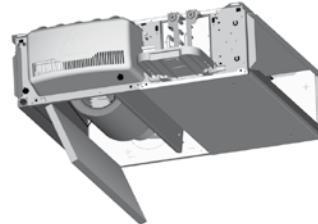
LYk MODEL (sizes 1 to 4)

- Air recovery grille integrated with the unit and air supply via diffusion kit with supply grille, supply plenum with Ø160 collars and mandatory Ø160 mm flexible duct.

NOTE: For COMFORT LINE LY Ø160, sizes 3 and 4, speed 5 must not be selected (air flow too high for Ø160 collars).

INNOVATIVE DESIGN

- Modular, scalable, functional frame,
- simplified maintenance (fan motor assembly + filter accessed via 2 or 4 bolts),
- no rivets used in its construction so it can be dismantled at the end of its service life,
- multiple configurations depending on customer requirements.



ADVANTAGES

- | | |
|--|--|
| <ul style="list-style-type: none"> ■ Minimal dimensions in the suspended ceilings. ■ Integration of the latest technical developments with a very-low-consumption HEE motor and the Epure function for high indoor air quality (IAQ). ■ Total flexibility and adaptability (assembly, water temperature, diffusion, filtration, etc.). ■ Extensive capacity range. | <ul style="list-style-type: none"> ■ Wide selection of coils to adapt to various water temperatures ■ Uses an ecological energy transfer fluid. ■ Comfort unit with high available static pressure. ■ Easy maintenance, simplified access. ■ Environmentally-responsible product. |
|--|--|

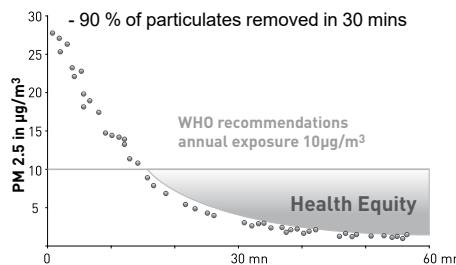
FUNCTION



Air quality

The air we breathe is full of fine particles which enter the respiratory system to varying degrees.

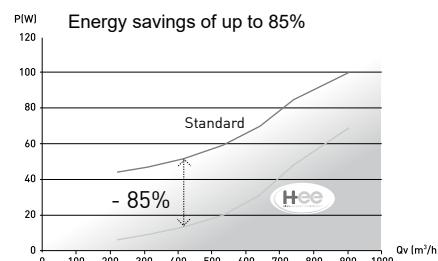
The Epure function (air purification system) is to exceed the WHO's recommendations on particle removal, reducing PM2.5 particulates to below 10 µg/m³ in less than an hour. This is equivalent to a reduction of 50% to 90% in particulate matter.



COMPLIANCE WITH ENERGY CONSERVATION REQUIREMENTS

High Energy Efficiency performance

In order to promote energy efficiency in buildings, COMFORT LINE is equipped with an HEE motor which reduces the unit's electricity consumption by up to 85%.



EASE OF INSTALLATION AND OPERATION

- Easy maintenance, with no need to remove the device, easy access to the fan motor assembly, air filter, hydraulic coil.
- Reduced thickness of the smallest unit (215 mm), to allow installation in suspended ceilings with less space.
- Flexible installation.

ECO-DESIGN

COMFORT LINE has been fully designed using eco-design principles and falls within CIAT's sustainable development policy.

- Choice of supplier located close to the production plant,
- 94% recyclability rate,
- since 2013, CIAT has been working in partnership with ECOLOGIC for the collection and recovery of waste from our appliances at end of life, subject to the WEEE directive.



MORPHO CODES - COMFORT LINE DESCRIPTION

Range	Size	Model	Assembly	No. and collar diameter	Coil type	Coupling	Thermal function		Motor	Speeds	Filter																																																																																																									
CFL	3 4C	LY	STD	3D200	4T	G	F	+ 1400W	HEE	depending on selection	G3																																																																																																									
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TECHNICAL DESCRIPTION

Frame

■ Galvanised panelling, nickel-plated zinc-coated steel fastenings.

Size 0:

Polyester textile fibre insulation. M1 fire rating, thickness 10 mm

Size 1 to 6:

Melamine resin insulation, springy open-cell foam, plus aluminium shield to prevent any dust build-up in the insulation and facilitate cleaning. M1 fire rating, thickness 15 mm.

Water coil

- 1 hot water or cold water circuit (2-tube system)
- 1 hot water + 1 cold water circuit (4-tube system)
- Internally threaded rotating "female" couplings with flat face (diameter G $\frac{1}{2}$ " and G $\frac{3}{4}$ " according to size) and O-ring gasket.
- Copper tubes, continuous aluminium fins
- Draining and air bleed valve
- 16 Bar nominal service pressure (at 20°C), 24 Bar test pressure
- 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)

Electrical heater (230V-1Ph-50Hz)

For Size 0:

Resistive wire type heater (230 V - 1-ph - 50 Hz)

The electrical heater has a double safety feature: Integrated self-hold safety thermostat with auto reset and thermal fuse

For sizes 1 to 6:

Shielded single-tube heating element, pin-mounted on the hydraulic coil outlet and providing excellent supply air temperature distribution.

1 capillary tube temperature limiter with manual reset, and 1 capsule temperature limiter with automatic reset.

Condensate drain pan

Size 0

Injected polypropylene drain pan insulated with 5 mm PE foam.

Drainage diameter: external Ø 16 mm

Class M1 fire rating

Size 1 to 6:

CIAT design (patent application no.1254978)

Recyclable thermoplastic drain pan, designed to reduce air leaks to outside the device on the one hand, and to prevent any air bypass around the coil on the other.

Its design also means that it retains only minimum condensates, while optimising the pump running time, and ensuring greater safety during any coil maintenance

Condensate drainage from the pan bottom, naturally inclined. Drainage bushings manually reversible toward the rear or front of the device

Drainage diameter: Ø 22 mm

Fan motor assembly size 0 to 5

1 fan motor assembly fitted with:

Fan

1 or 2 HEE impeller(s), with CIAT exclusive High Energy Efficiency airfoil blades in self-extinguishable ABS (HB) with galvanised metal housing.

HEE motor

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

HEE motor description:

- Brushless technology
- Sealed, tropicalised, with protected shaft
- Gradual actuation with 0-10V control signal
- Internal normally closed series automatic heat protection on the winding.
- Supply 230V±10%/1-Ph/50-60 Hz.

Optional

- 3-speed on/off output motor actuation
- "DFS" motor fault output using a photocoupler for potential alarm feedback via a KNX protocol communication bus. (via V3000 controller)

Note: The minimum voltage required for start-up of the motor is 2V.

Or

Asynchronous motor:

5-speed motor connected to terminal block.

Asynchronous motor description:

- Sealed, tropicalised, with protected shaft,
- permanent capacitor,
- ball bearings,
- internal automatic overload protection as standard on winding,
- resilient mounts,
- 230 V±10 %/1-ph/50-60 Hz supply,
- high efficiency and power factor.

Size 6 fan motor assembly

HEE solution:

2 fan motor assemblies fitted with:

Fan

Aluminium single impeller with forward-curved airfoil blades, dynamically balanced dual inlet with galvanised metal housing.

HEE motor

High energy efficiency motor enabling a reduction of up to 85% in electricity consumption (see HEE motor description for sizes 1 to 5)

AC motor solution (not compliant with ErP2015):

Fan

2 aluminium impellers with forward-curved airfoil blades, dynamically balanced dual inlet with galvanised metal housings.

Asynchronous motor

Motor with 5 speeds connected to the terminal block (see description of AC motor sizes 1 to 5).

Electrics box

- Hydraulic connection side,
- large ABS electrics box, 2-screw closure,
- protection rating IP20,
- terminal block on DIN rail in accordance with EN 50022, depth 7.5 mm,
- cable routing for customer electrical connections.

Filtration available (excluding Compact U and H versions)

■ EPURE function

- A protected air stream which prevents particles from being drawn into suspended ceilings.
- Local filtration using a high efficiency folded filter medium effective for PM of 2.5 microns:
 - Filter area: 10 times the intake surface area.
 - Low energy impact.
 - Improved service life.
 - M1 fire rating.
 - Easy access via 2 or 4 bolts

Or

- Flexible filter medium made of regenerative polyester fibre.
- EN779 Efficiency Class: G3.
- Fire rating: M1.
- Rigid metal frame.
- Easy access via 2 or 4 bolts.

Plenums

- Galvanised panelling, nickel-plated zinc-coated steel fastenings,
- ABS (HB) collars clipped onto the panelling,
- Supply plenum:

Size 0:

insulated plenum: polyester textile fibre insulation. M1 fire rating, thickness 10 mm

Size 1 to 6:

insulated plenum: melamine resin insulation, flexible open-cell foam, plus aluminium covering to prevent any dust build-up in the insulation and facilitate cleaning.

M1 fire rating, thickness 15 mm,

- Return plenum:
 - uninsulated plenum.

Mounting the unit

- COMFORT LINE must be suspended from the ceiling using 4 or 6 threaded rods for size 6: with CIAT resilient mounts min. diameter 6 mm and max. diameter 8 mm, or without CIAT suspension diameter 8 mm to 10 mm.

Packaging

- Delivered on pallet and protected by stretch wrap film.

Control

- RTR-E electromechanical wall-mounted thermostat range
- V30 and V300 electronic range,
- V3000 networked electronic range (KNX),
- Networked electronic range (LON): VLON2,
- Fresh air control:
 - Pack R1: fresh air managed via presence sensor,
 - Pack R+ : Fresh air managed by CO₂ sensor.

Options (factory-fitted)

- Condensate drain pump
- Smooth metal rectangular supply air sleeve for Size 0
- Smooth metal rectangular return sleeve on all sizes
- Supply and/or return plenums for Y, H and U' assembly
- Unit without electrics box or DIN rail ("bare wire option")
- Hydraulic coil with protected fins for harmful/corrosive atmospheres (coastal locations, or areas close to chemical industries)

Accessories (supplied separately)

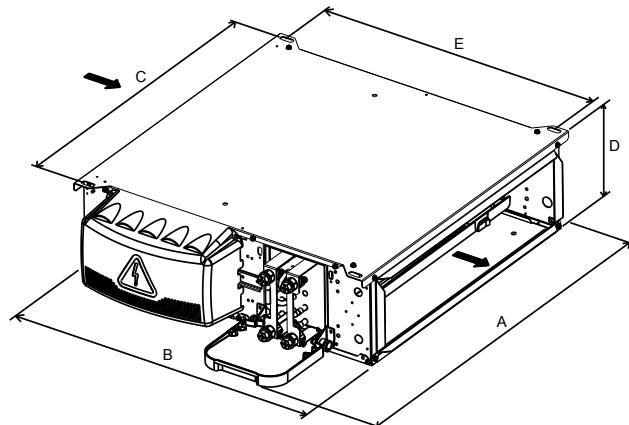
- Ø100 mm or 125 mm smooth collar,
- Ø100 mm or 125 mm self-adjustable fresh air module kit:
 - flow rate 15/30/45 m³/h,
 - flow rate 60/75/90 m³/h,
- Resilient mounts,
- Ø 125 mm self-adjustable fresh air module kit for flow rates of 120/150/180 m³/h
- Ø160 mm circular duct accessory for air distribution kit,
- Condensate pan expansions, except for size 0,
- Flexible connection kit, length 300 mm, with or without 9-mm insulation.

Specific options (on request)

- Return plenum insulation
- Plenums with collar configurations (diameter and position) in addition to the standard offer
- Electrical and hydraulic connections on opposite sides

LINEAR CONCEPTS

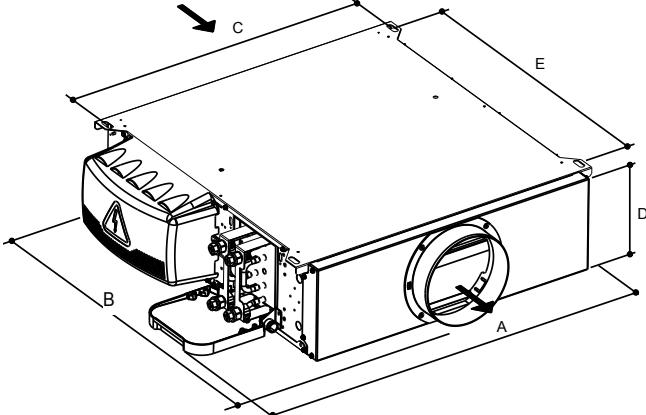
I MODEL



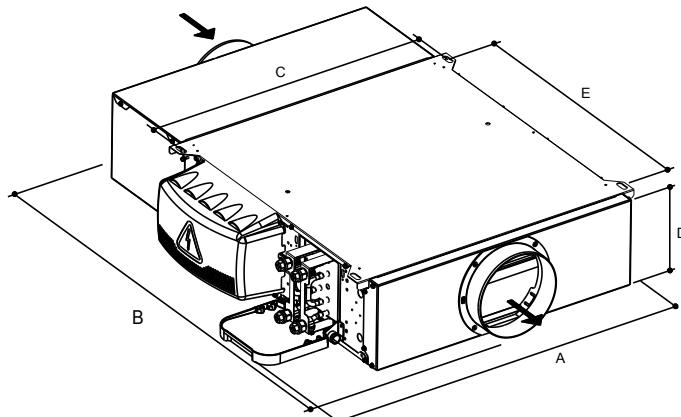
	A	B	C	D	E	Supply	Suction
T0 *	708	590	485	240	538	430 x 210	430 x 210
T1		898		215		620 x 170	609 x 170
T2			692			620 x 200	609 x 200
T3				245		920 x 200	909 x 200
T4		1198		992		920 x 235	900 x 235
T5					280	1220 x 235	1209 x 235
T6		1498			375	1220 x 330	1200 x 330
* devices without supply air sleeve							

* devices without supply air sleeve

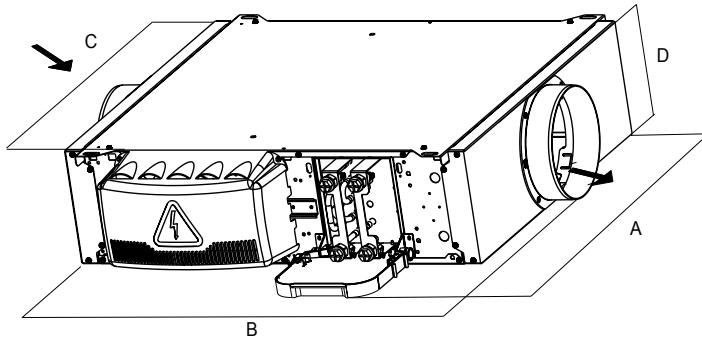
Y MODEL



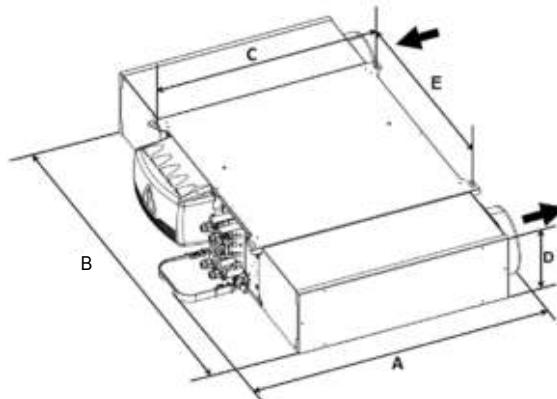
	A	B	C	D	E	Supply	Suction
T0	708	642	485	240	538	1 or 2 x Ø 160 or 200 mm	430 x 210
T1		898		215		1 or 2 x Ø 160 or 200 mm	609 x 170
T2			692			2 x Ø 160 or 200 mm	609 x 200
T3				245		3 x Ø 160 or 200 mm	909 x 200
T4		1198		992		3 x Ø 200 or 2 x Ø 250 mm	900 x 235
T5					280	4 x Ø 200 or 3 x Ø 250 mm	1209 x 235
T6		1498			375	5 x Ø 200 or 4 x Ø 250 mm	1200 x 330

H MODEL


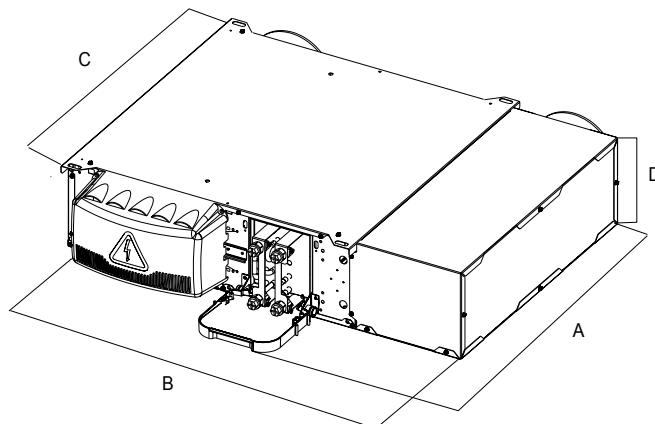
	A	B	C	D	E	Supply	Suction
T0	708	694	485	240	538	1 or 2 x Ø 160 or 200 mm	1 or 2 x Ø 160 or 200 mm
T1				215		1 or 2 x Ø 160 or 200 mm	1 or 2 x Ø 160 or 200 mm
T2	898		692			2 x Ø 160 or 200 mm	2 x Ø 160 or 200 mm
T3		1095		245		3 x Ø 160 or 200 mm	3 x Ø 160 or 200 mm
T4			992			3 x Ø 200 or 2 x Ø 250 mm	3 x Ø 200 or 2 x Ø 250 mm
T5	1198			280		4 x Ø 200 or 3 x Ø 250 mm	4 x Ø 200 or 3 x Ø 250 mm
T6		1498			375	5 x Ø 200 or 4 x Ø 250 mm	5 x Ø 200 or 4 x Ø 250 mm

H COMPACT MODEL


	A	B	C	D	E	Supply	Suction
T0	708	694	485	240	538	1 or 2 x Ø 160 or 200 mm	1 or 2 x Ø 160 or 200 mm
T1				215		1 or 2 x Ø 160 or 200 mm	1 or 2 x Ø 160 or 200 mm
T2	898		692			2 x Ø 160 or 200 mm	2 x Ø 160 or 200 mm
T3		872		245		3 x Ø 160 or 200 mm	3 x Ø 160 or 200 mm
T4			992			3 x Ø 200 or 2 x Ø 250 mm	3 x Ø 200 or 2 x Ø 250 mm

U MODEL


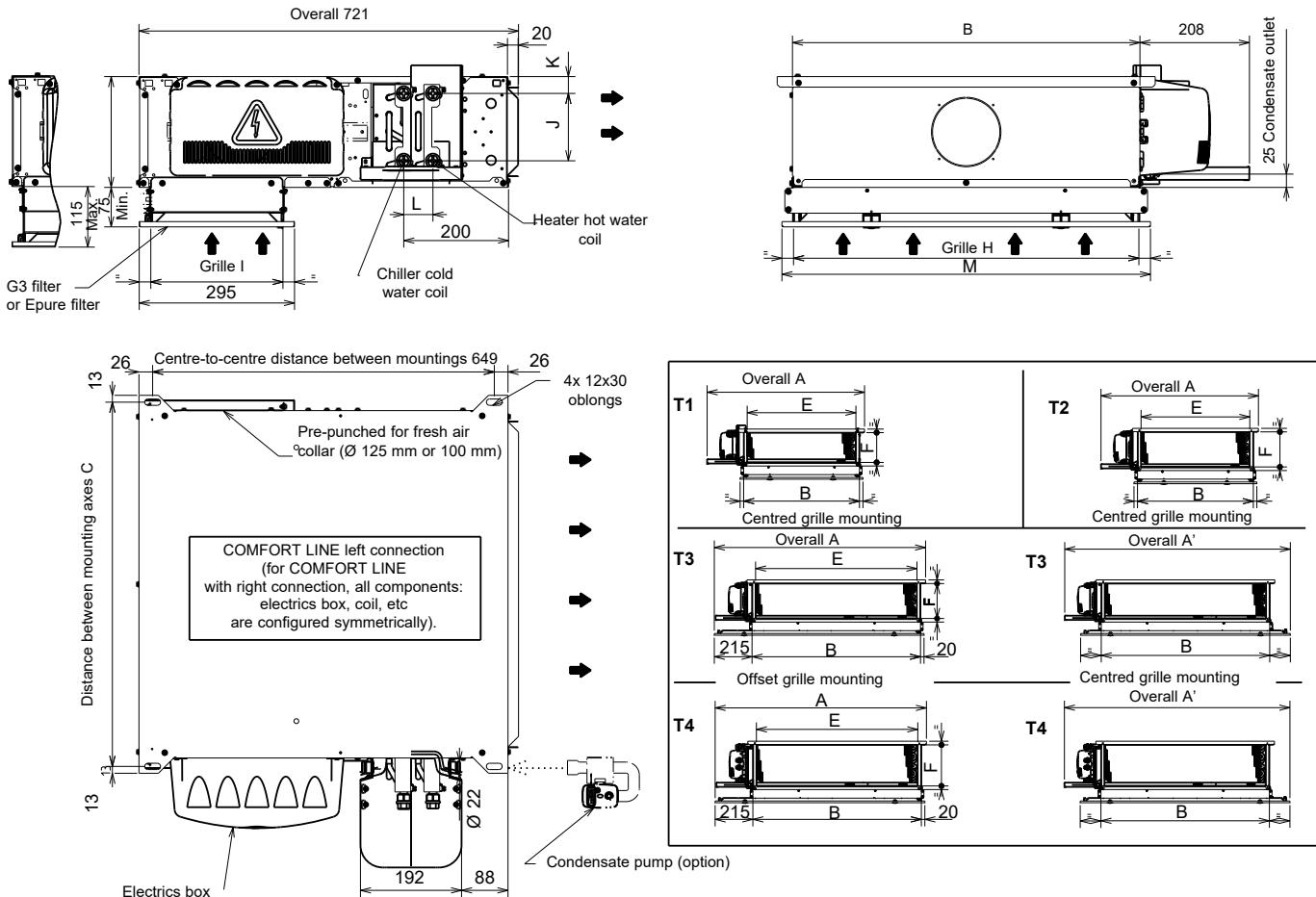
	A	B	C	D	E	Supply	Suction
T0	730	1060	485	240	538	1 x Ø 200 mm or Ø 160 mm	1 x Ø 200 mm or Ø 160 mm
T1				215		1 x Ø 200 mm or Ø 160 mm	1 x Ø 200 mm or Ø 160 mm
T2			692			1 x Ø 200 mm or Ø 160 mm	1 x Ø 200 mm or Ø 160 mm
T3				245		1 x Ø 200 mm	1 x Ø 200 mm
T4			992		280	1 x Ø 250 mm	1 x Ø 250 mm

U Compact MODEL


	A	B	C	D	E	Supply	Suction
T0	730	825	485	240	538	1 x Ø 200 mm or Ø 160 mm	1 x Ø 200 mm or Ø 160 mm
T1				215		1 x Ø 200 mm or Ø 160 mm	1 x Ø 200 mm or Ø 160 mm
T2			692		649	1 x Ø 200 mm or Ø 160 mm	1 x Ø 200 mm or Ø 160 mm

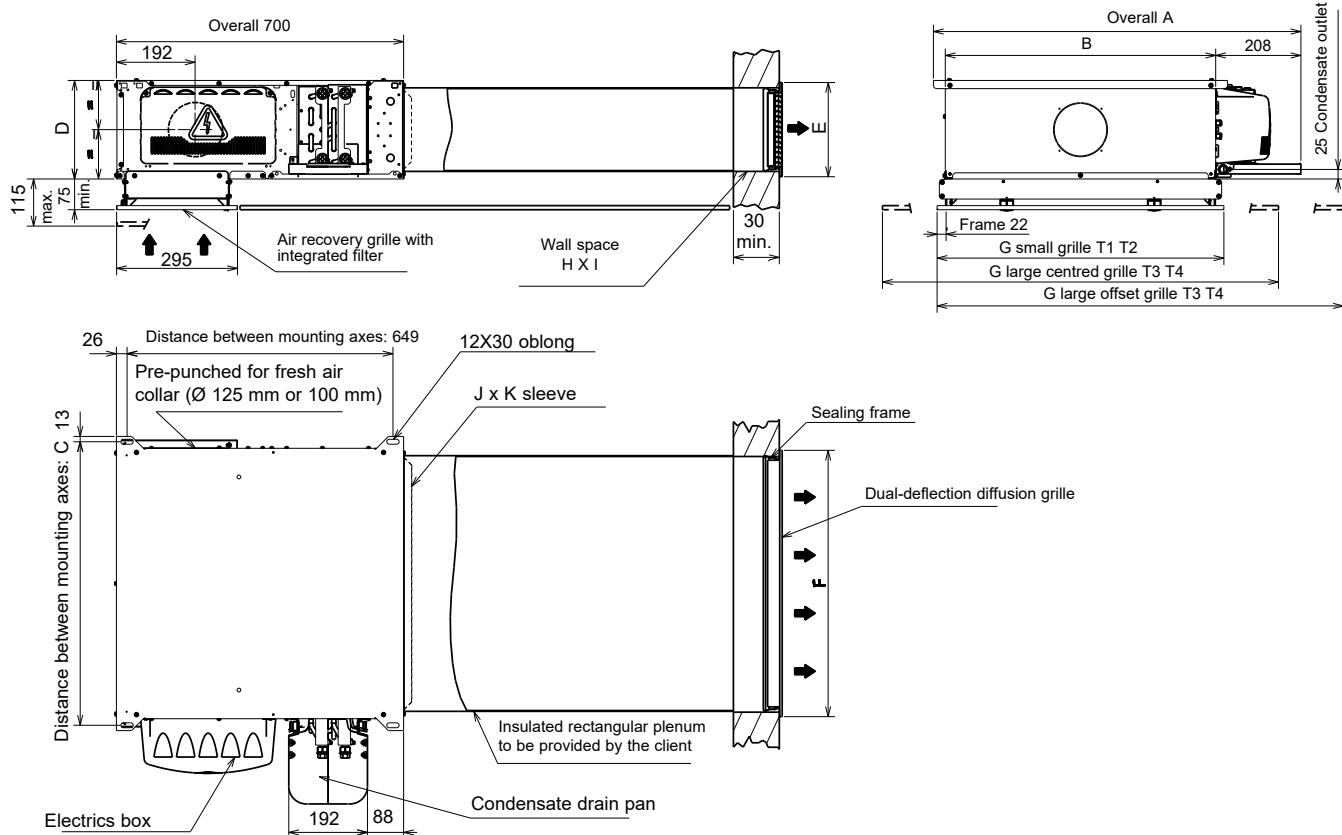
L CONCEPTS

LI MODEL

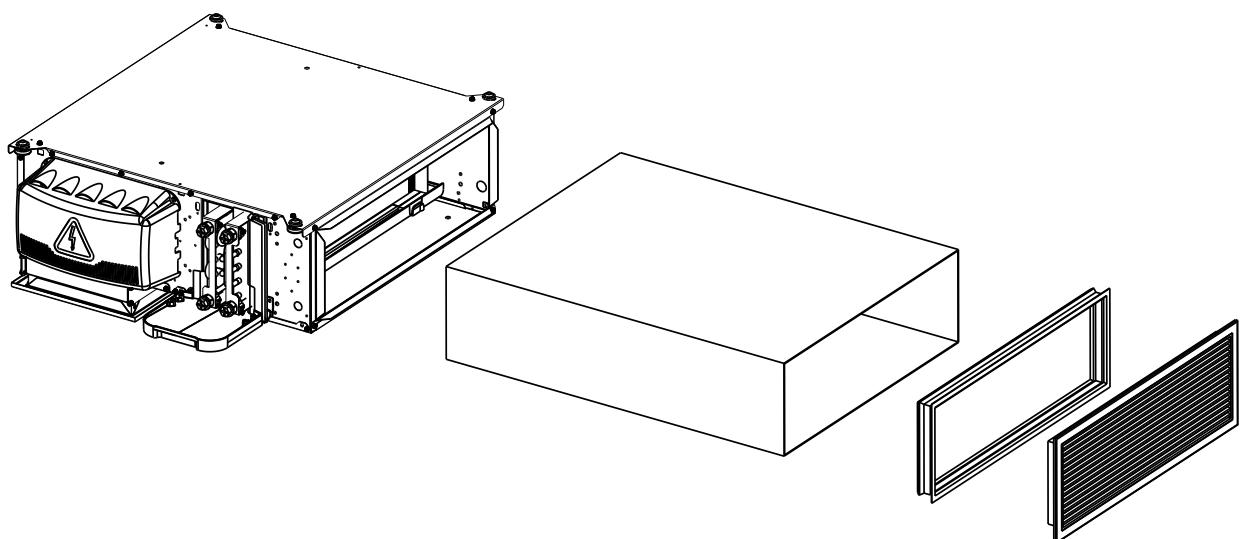


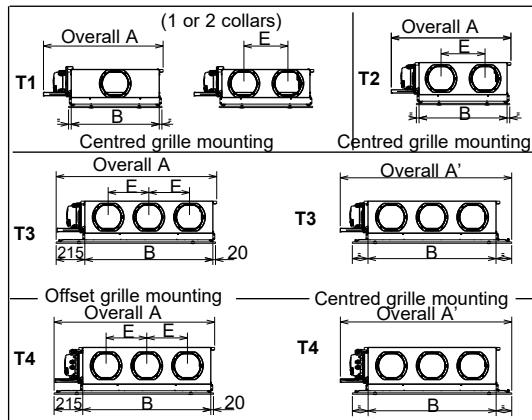
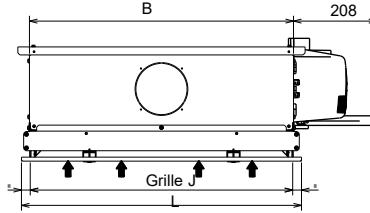
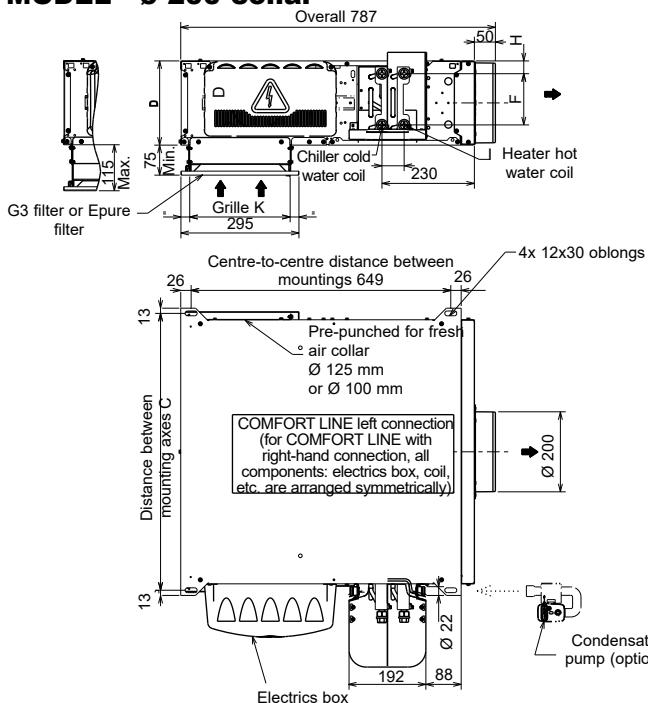
Note: 1200-mm long grille optional for sizes 1 & 2. Consult us

	A	A'	B	C	D	E	F	G		I	J		K		L(4T)		D
						Air supply	Air supply	Coil C	Coil H		Coil C	Coil H	Coil C	Coil H	3 rows	4 rows	
T1	898		660	692	215	620	170	1/2"	250	128	128	35	35	35	35	700	
T2					245		200										
T3	1205	1285	960	992	280	920	235	3/4"		160	160		110		62	1195	
T4										192	40						

LIK MODEL


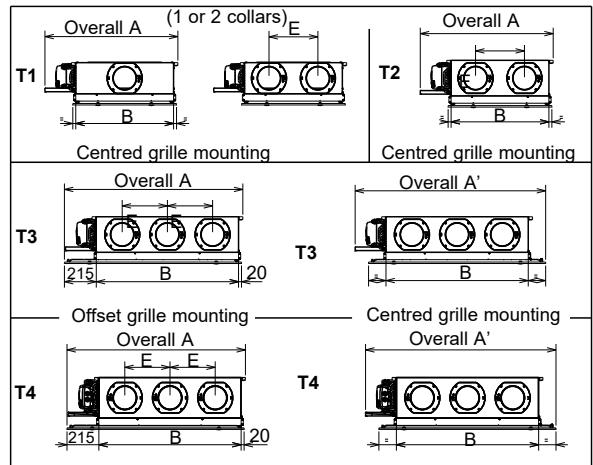
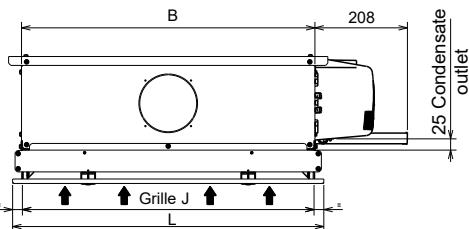
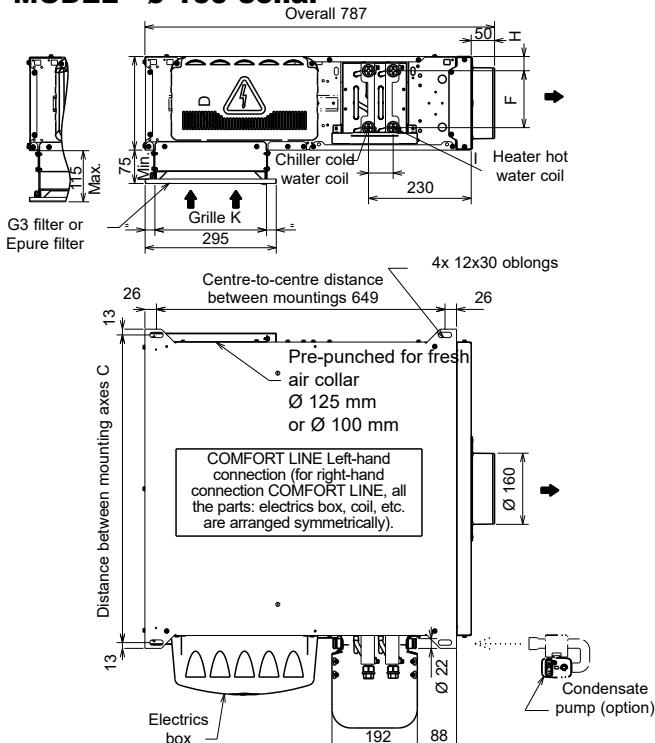
	A	B	C	D	E	F	G	H	I	J	K
T1	898	660	692	215	200	650	700	175	625	620	170
T2				245	230			205			200
T3	1205	960	992	280	265	950	1195	240	925	920	235
T4											



LY MODEL - ø 200 collar


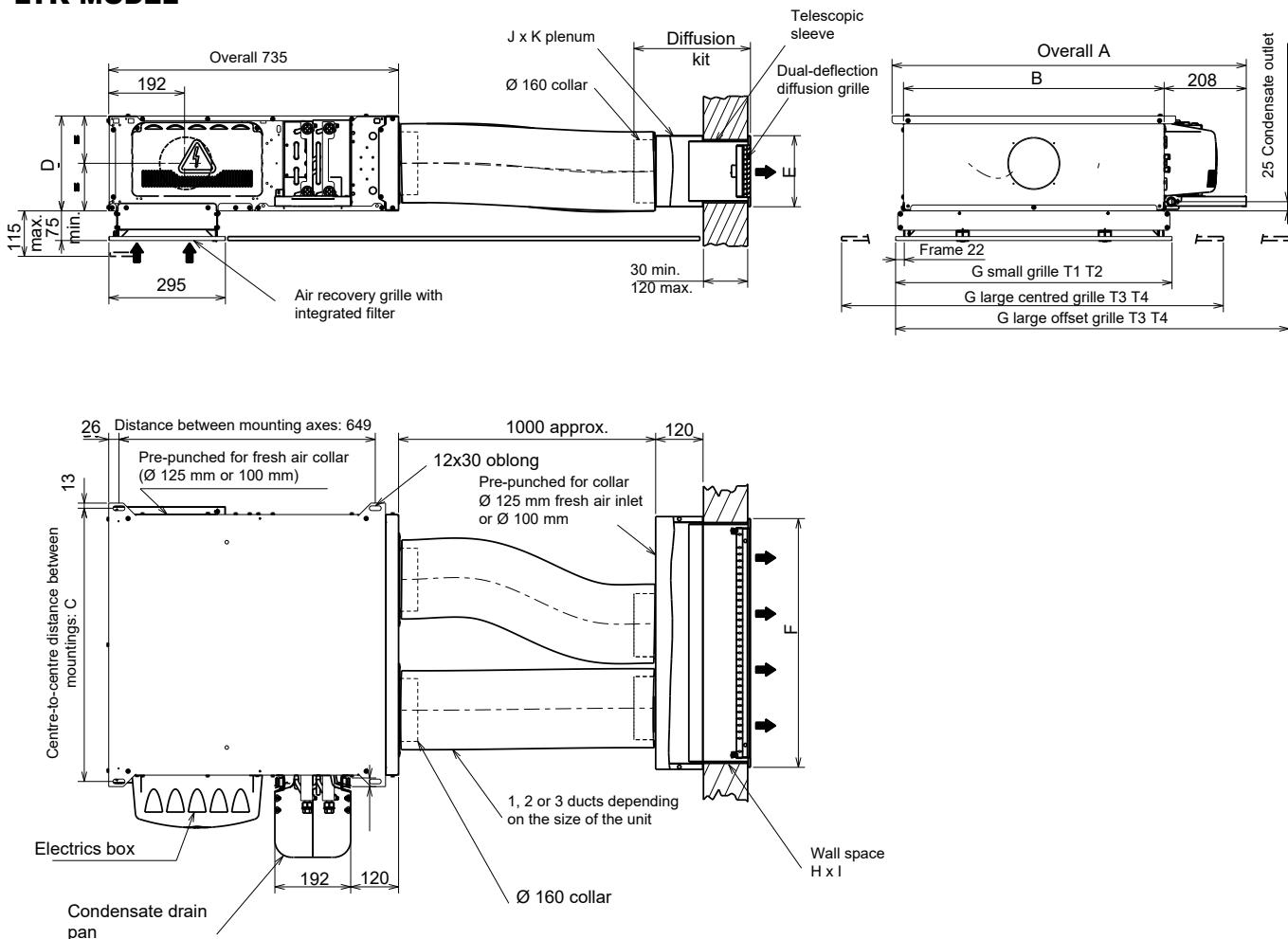
Note: 1200-mm long grille optional for sizes 1 & 2. Consult us

	A	A'	B	C	D	E	F	Coil C	Coil H	G	Coil C	H	Coil C	Coil H	I (4T)	J	K	L
T1 (1V)																		
T1 (2V)	898			660	692	215		128	128									
T2								330		1/2"								
T3	1205	1285	960	992		245		160	160		35	35		55	55	655	250	700
T4						305		192	192	3/4"			110		62	1150		1195

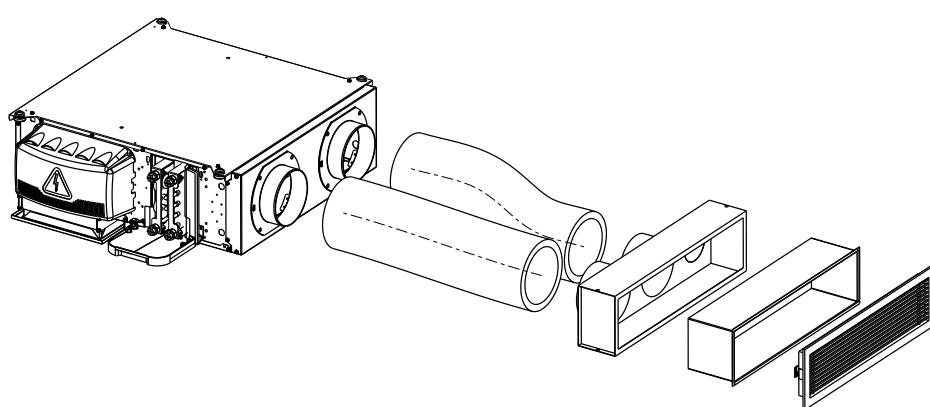
LY MODEL - ø 160 collar


Note: 1200-mm long grille optional for sizes 1 & 2. Consult us

	A	A'	B	C	D	E	F	Coil C	Coil H	G	Coil C	H	Coil C	Coil H	I (4T)	J	K	L
T1 (1V)																		
T1 (2V)	898			660	692	215		128	128									
T2								330		1/2"								
T3	1205	1285	960	992		245		160	160		35	35		55	55	655	250	700
T4						305		192	192	3/4"			110		62	1150		1195

LYK MODEL


	A	B	C	D	E	F	G	H	I	J	K	No. of ducts
T1 (1V)											440	1
T1 (2V)	898	660	692	215	200	650	700	175	625	180	640	2
T2 (2V)				245	230			205				
T3 (3V)	1205	960	992	280	265	950	1195	240	925		840	3
T4 (3V)												



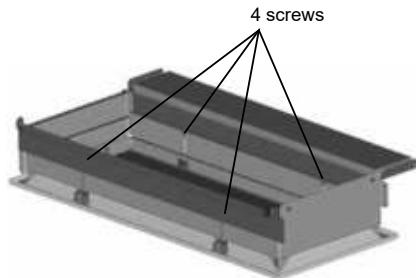
NOTE: For COMFORT LINE LY Ø160, sizes 3 and 4, speed 5 must not be selected (air flow too high for Ø160 collars).

Return grille adjustment

Sizes 1 and 2 700 grille on 700 frame
Sizes 3 and 4 grille on 1200 frame

Vertical adjustment only:

- 1) Open the grille fully using the 2 clips.
- 2) Remove the grille + the filter completely.
- 3) Unscrew the 4 screws (see the view below) then adjust the height with the adjustment holes, then refit the screws.
- 4) Cover over the adjustment holes with aluminium tape.

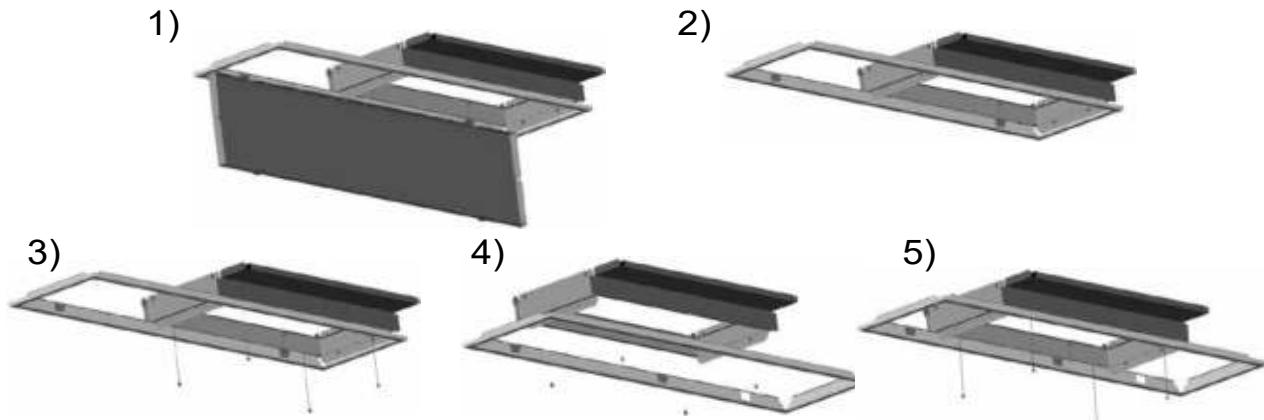


Sizes 1 and 2 700 grille on 1200 frame

Vertical adjustment (see above)

Horizontal adjustment:

- 1) Open the grille using the 2 clips.
- 2) Remove the grille + the filter completely.
- 3) Undo the 4 screws.
- 4) Move the support panel.
- 5) Refit the 4 screws.



SUMMARY OF COLLAR NUMBERS FOR MODELS Y, H, H COMPACT* AND LY

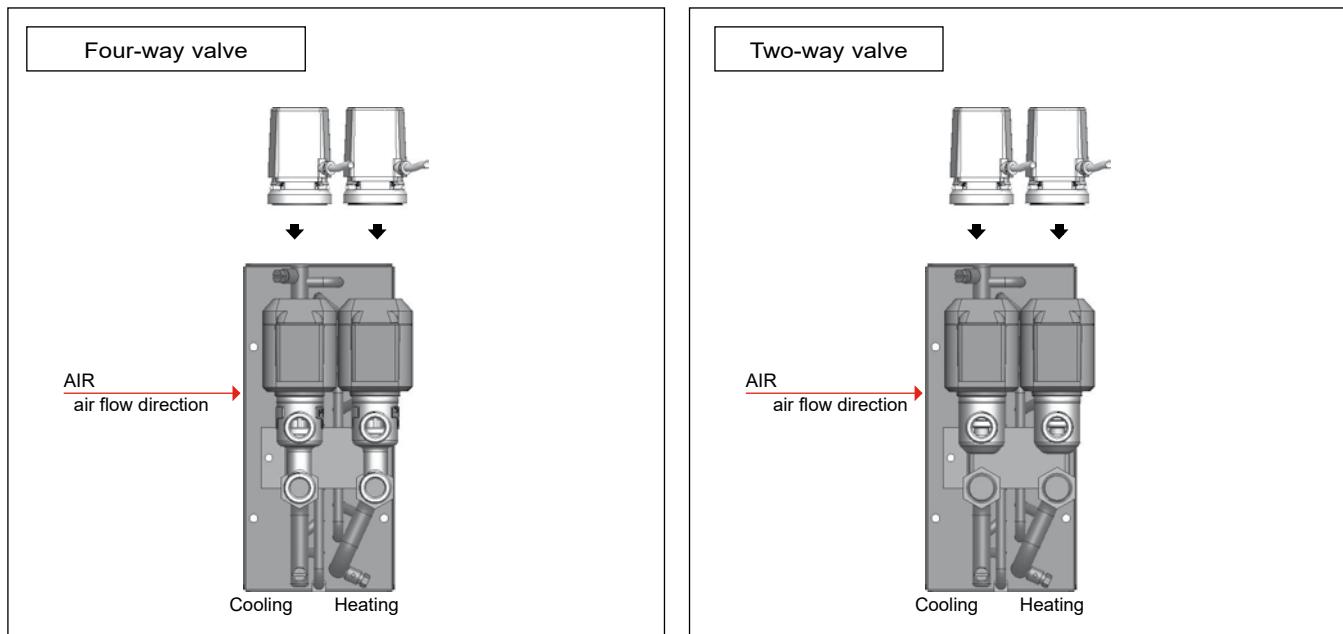
Size	Collar (s) Ø 160	Collar (s) Ø 200	Collar (s) Ø 250
T0 and T1			
T2			
T3			
T4			
T5			
T6			

* Sizes 0 to 4 only

HYDRAULIC CONNECTIONS WITH FITTED VALVES

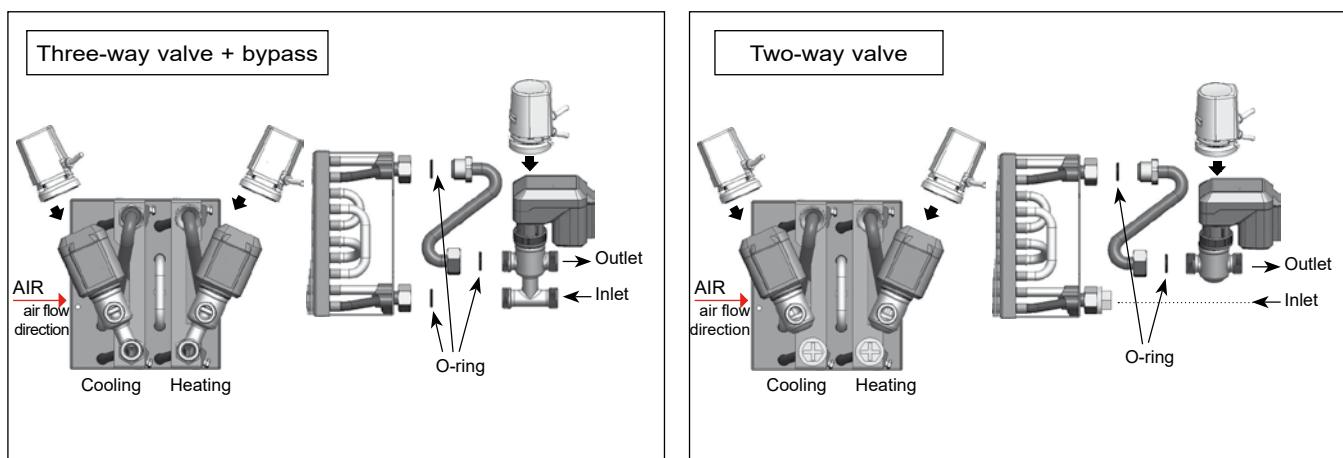
Heating/cooling assembly for valves with 3-point or thermal actuators

Sizes :0



Note: view showing left-hand accessories opposite the air supply. For right-hand accessories, heating circuit before cooling circuit.

Sizes 1 - 2 - 3

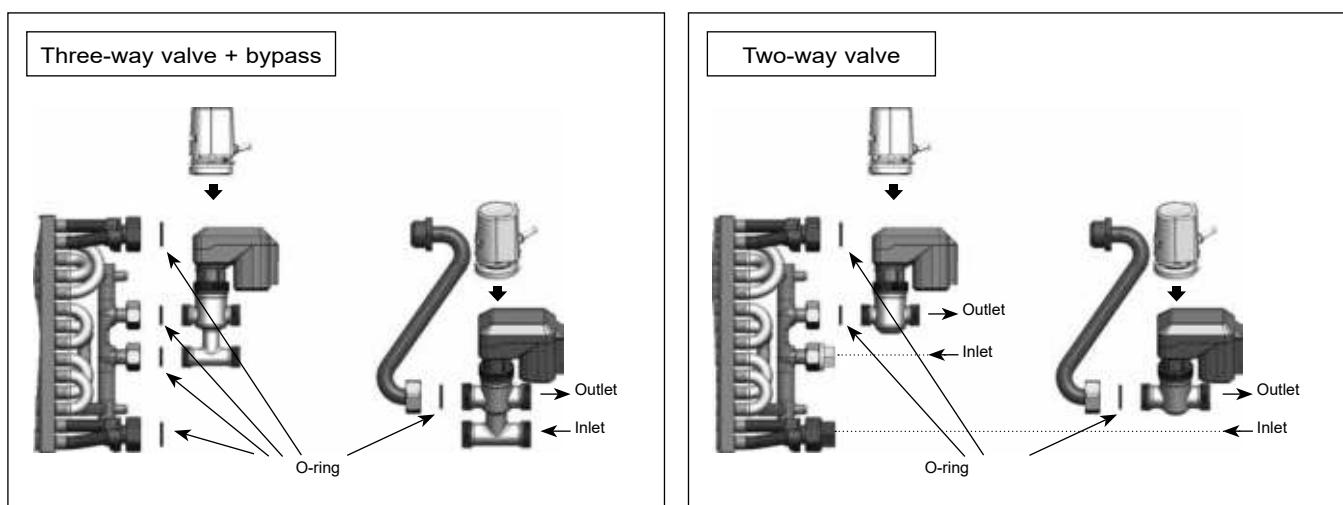
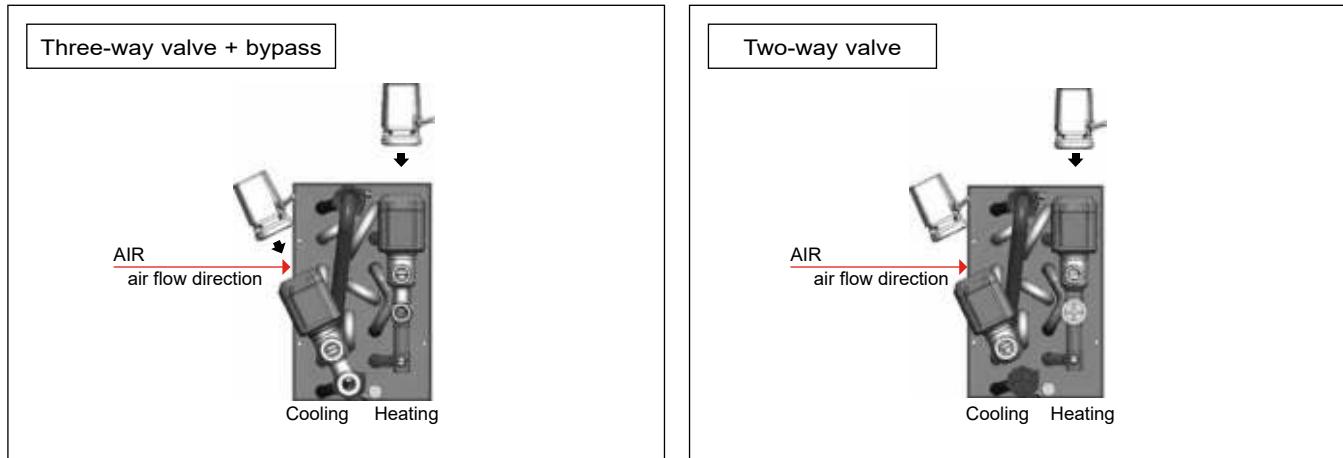


Note: view showing left-hand accessories opposite the air supply. For right-hand accessories, symmetrical view.

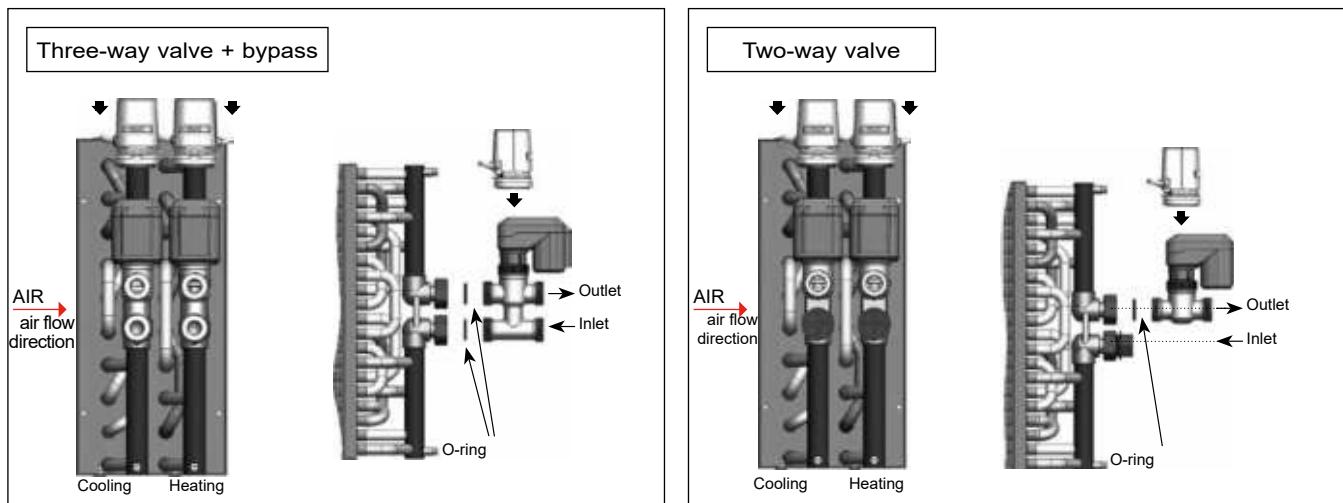
HYDRAULIC CONNECTIONS WITH FITTED VALVES

Heating/cooling assembly for valves with 3-point or thermal actuators

Sizes 4 - 5



Size 6



Note: view showing left-hand accessories opposite the air supply. For right-hand accessories, symmetrical view.

Motor electrical data notes

	Motor speed	AC asynchronous motor							HEE brushless motor						
		T0	T1	T2	T3	T4	T5*	T6 *	T0	T1	T2	T3	T4	T5	T6 *
Max. power input (W)	V5	71	74	119	166	180	223	611	48	37	72	113	97	172	343
	V4	48	48	104	124	125	192	523	26	22	54	47	38	117	330
	V3	34	42	88	111	110	163	455	13	14	36	27	22	67	307
	V2	21	36	67	96	95	149	391	6	8	14	14	13	36	178
	V1	14	34	51	93	90	129	333	4	5	6	9	8	17	110
Max. input current (A)	V5	0,31	0,32	0,53	0,7	0,77	0,95	2,68	0,37	0,25	0,47	0,69	0,61	1,06	2,59
	V4	0,20	0,22	0,45	0,52	0,53	0,81	2,32	0,20	0,16	0,36	0,3	0,25	0,73	2,36
	V3	0,15	0,2	0,38	0,47	0,48	0,69	2,02	0,12	0,11	0,25	0,18	0,15	0,43	2,22
	V2	0,09	0,18	0,29	0,42	0,42	0,64	1,73	0,07	0,07	0,11	0,1	0,1	0,24	1,32
	V1	0,07	0,18	0,22	0,41	0,4	0,57	1,48	0,06	0,06	0,06	0,07	0,07	0,12	0,75

NB: Specifications given for a 230V +/-10% - 50 Hz power supply. Values with outlet open
 For operation at 60 Hz, the power input and rotation speed values are generally higher.
 Motor operating range: min. return T°C: 0°C, max. return T°C: 40°C

Coil contents

	Cooling coil	Heating coil	
		2T	4T
02B	0,35	0,35	
04B	0,38		0,15
12B/14B	0,47	0,47	0,18
12D/14D	0,64	0,64	0,26
12E	0,89		
22C/24C	0,65	0,65	0,18
22D/24D	0,82	0,82	0,26
22E	1,07		
32C/34C	0,91	0,91	0,25
32D/34D	1,15	1,15	0,37
32E	1,51		
42C/44C	1,9	1,9	0,46
42D/44D	2,34	2,34	0,46
42E	3,22		
52C/54C	2,43	2,43	0,59
52D/54D	3	3	0,59
52E	4,15		
62B/64B	3,07	3,07	1,64
62D/64D	4,5	4,5	1,65
62E	5,93		

Coil coupling diameters

Coil coupling type: flat face swivel nuts with a female thread

Valve outlet coupling type: "male flat face" threaded couplings to be used

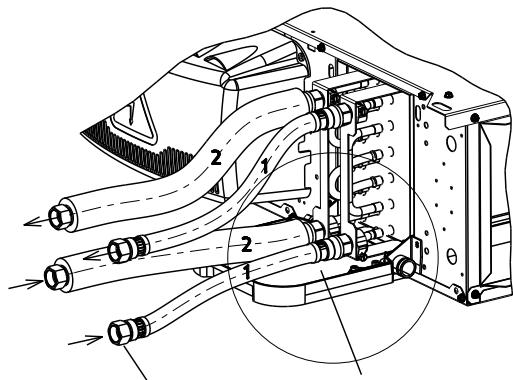
		T0	T1	T2	T3	T4	T5	T6
2-tube system	Hot or cold water coil	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G3/4"	G3/4"	G3/4"
4-tube system	Cold water coil	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G3/4"	G3/4"	G3/4"
	Hot water coil	G 1/2"						

Weight

	Weight (kg)						
	T0	T1	T2	T3	T4	T5	T6
I	15	25	27	36	39	47	65
Y	15,5	27	29	39	42	51	69
H compact	16	29	31	42	45	-	-
H		34	34	46	49	60	78
U	21	35	38	51	57	-	-
U compact	18	30	32	-	-	-	-
LI	-	31	33	44	47	-	-
LY	-	33	35	47	50	-	-

ASSEMBLY OF FLEXIBLE HOSES (ACCESSORIES SUPPLIED IN KIT) WITH OR WITHOUT VALVES

Assembly without valves



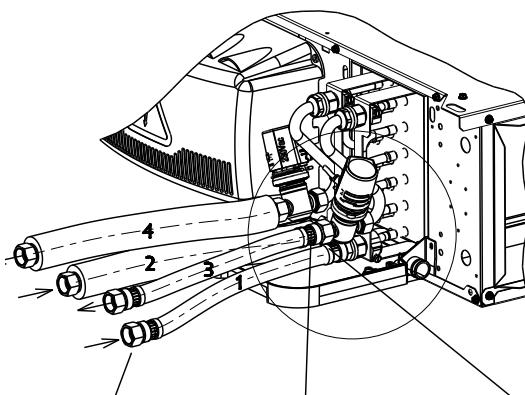
Female rotary couplings with flat face (G1/2" or G3/4"), customer side

Male cylindrical couplings with flat face (G1/2" or G3/4"), unit side

TECHNICAL DESCRIPTION OF FLEXIBLE HOSES

- 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 + duct.
- Only on insulated cooling hoses
 - Heat insulating sheath in M1 cellular foam (9 mm thick) glued at each end to the crimping bush.
 - 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 at 110°C: 10 bar

Assembly with 2-way valves

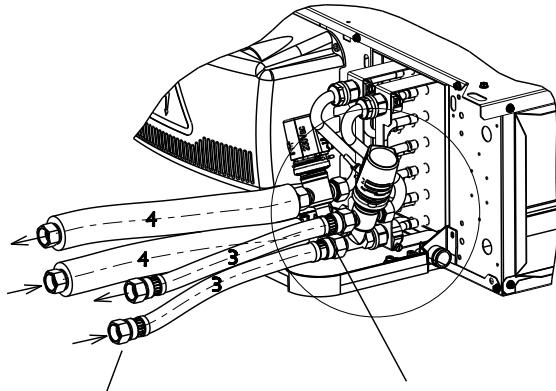


Female rotary couplings with flat face (G1/2" or G3/4"), customer side

Female rotary couplings with flat face (G1/2" or G3/4"), customer side (on valves)

Male cylindrical fixed couplings with flat face (G1/2" or G3/4"), unit side (on coil connections)

Assembly with 3-way valves + by-pass



Female rotary couplings with flat face (G1/2" or G3/4"), customer side

Female rotary couplings with flat face (G1/2" or G3/4"), customer side (on valves)

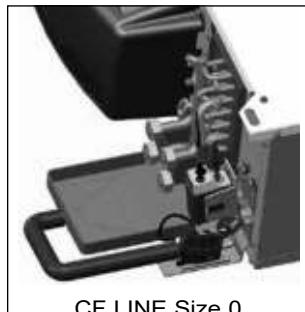
No	Type of flexible connection	Circuit	G1/2" connection	G3/4" connection
1	Rotary female/Fixed male	Heating	7247868	7401828
2	Rotary female/Fixed male, heat insulated	Cooling	5202288	7247867
3	Rotary female/Rotary female	Heating	7247837	7387851
4	Rotary female/Rotary female, heat insulated	Cooling	5202289	5202298

NB: flexible connection length = 300 mm

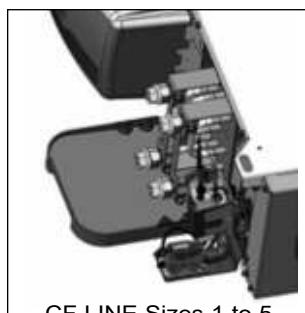
TECHNICAL CHARACTERISTICS

Condensate drain pump

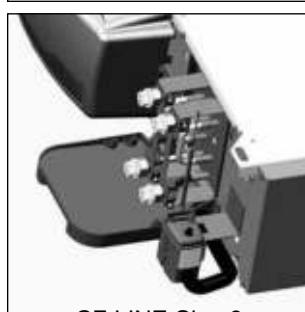
	Size 0 to 5	Size 6
Maximum flow rate	10.4 l/h	20 l/h
Max. discharge height	7 m (flow rate = 4 l/h)	10 m (flow rate = 4 l/h)
Maximum pressure	10 m (flow rate = 0 l/h)	14 m (flow rate = 0 l/h)
4 metres	7	6
Sound level at 1 m as per EN ISO 3744 and 4871 (Measurement taken at LNE, pump in water, outside of application)	20.2 dBA	23 dBA
Sound level during application at 1 m: (measurements taken at the Sauermann acoustic lab, pump in water)		< or = 28 dBA
Power supply	230 V +10%/-15% - 50/60 Hz - 19 W	230 V - 50/60 Hz - 14 W
Electrical insulation class	Class 1	Double insulation
Detection levels	ON: 14.7 mm, OFF: 10.7 mm, AL: 17 mm	ON: 18 mm, OFF: 12 mm AL: 21 mm
Safety switch	BS: 5A resistive - 250V Contacts made from AgNi 90/10, gold-plated	BS 8 A resistance - 250 V
Heat protection (overheating)	70°C (automatic restart)	90°C (automatic restart)
Operating cycle (duty factor)	100%	30%: 3s ON - 7s OFF
Protection (as per BS EN 60529)	IP64	IP54
Safety standard	CE	CE
RoHS directive	Compliant	Compliant
WEEE directive	Compliant	Compliant



CF LINE Size 0



CF LINE Sizes 1 to 5



CF LINE Size 6

Table of actual pump flow rates with Ø 6 mm PVC tube:

- Comfort Line sizes 0 to 5: Maximum flow rate of 10.4 l/h for a pumping height of 1 metres and a horizontal pipe length of 5 metres.

Sizes 0 to 5: Water flow rate in litres per hour (-15% / +20%)				
Discharge height	Horizontal length of the discharge pipe			
	5 metres	10 metres	20 metres	30 metres
1 metre	10.4	9.1	8.3	7.3
2 metres	8.5	7.8	7	6.4
3 metres	7.9	7.1	6.3	5.8
4 metres	7	6	5.3	4.9

- Comfort Line size 6: Maximum flow rate of 20 l/h for a pumping height of 0 metres and a maximum pipe length of 5 metres.

Size 6: Water flow rate in litres per hour (-15% / +20%)				
Discharge height	Horizontal length of the discharge pipe			
	5 metres	10 metres	20 metres	30 metres
0 metre	20	19	18	17
2 metres	16	15	14	13.5
4 metres	11.5	11	10.5	10
6 metres	-	8.5	7.5	6.5
8 metres	-	6	5	4
10 metres	-	4	3.5	2.5

Operating limit:

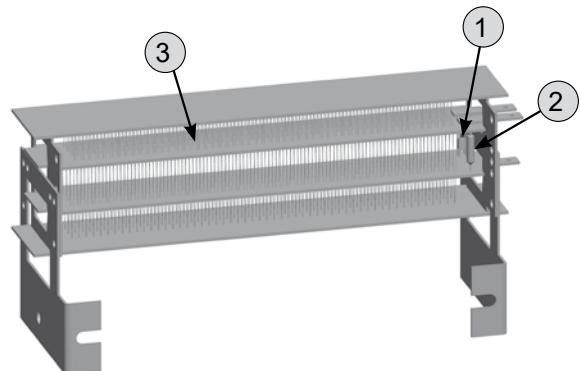
Drainage: ➔ 6 mm int. flexible pipe, ➔ 8.8 mm end piece. This accessory must be paired with a valve control to allow the upper safety limit to control the valve's closure (stop condensate).

Condensate flow rate (l/h) = $P_{\text{total}} - P_{\text{sensible}} (W)$

TECHNICAL CHARACTERISTICS

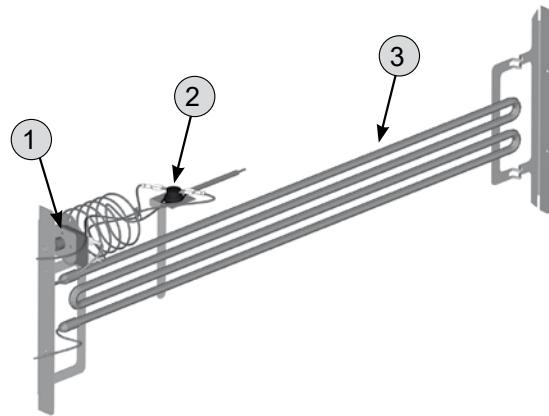
Electrical heater for sizes 0

- (1) Self-holding automatically reset integrated safety thermostat.
- (2) A thermal fuse.
- (3) Resistive wire heater unit



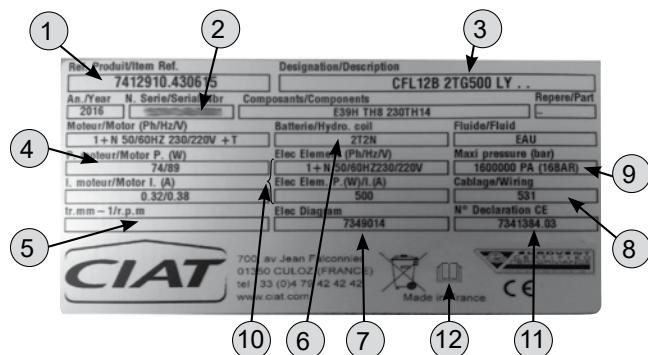
Electrical heater for sizes 1 to 6

- (1) 1 capillary tube temperature limiter with manual reset .
- (2) 1 capsule temperature limiter with automatic reset.
- (3) Shielded single-tube heating element

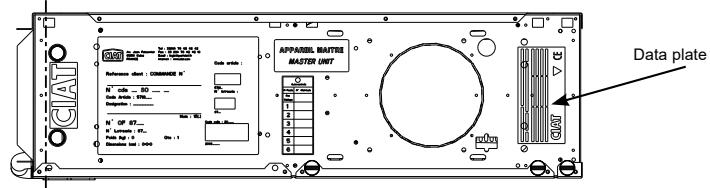


Unit information plate

- (1) Code,
- (2) serial number,
- (3) device name,
- (4) motor nominal capacity,
- (5) motor rotation speed,
- (6) coil type,
- (7) wiring diagram reference,
- (8) motor speed wiring,
- (9) maximum operating pressure
- (10) electric heater specifications (if fitted).
- (11) EC declaration no.
- (12) refer to the installation instructions



The name plate contains all the information required to identify the unit and its configuration. This plate is always mounted on the face opposite the electrics box.



U MODEL

COMFORT LINE U model	AC motor speeds	HEE motor voltage (V)	Air flow in m ³ /h	Available static pressure (1)	Cooling cap. W		Heating capacity W	Power input		Overall sound power LW dB(A)	Comfort level ISO or NR	Average air temperature rise in K (2) Auxiliary electric heater 230/1/50	
					Total	Sensible		AC Motor W	HEE motor W			700W	1400W
32C/32C HEE	V5	9.3	660		3 720	3 110	4 380	149	96	57	34	3.1	6.2
	V4	8	575		3 350	2 740	3 890	94	63	54	30	3.6	7.2
	V3	7	500	50	3 020	2 440	3 410	90	43	50	26	4.1	8.2
	V2	5.5	390		2 500	1 970	2 680	85	23	44	19	5.3	10.6
	V1	4.4	305		2 080	1 610	2 120	85	14	39	<15	6.8	13.5
32D/32D HEE	V5	9.3	660		4 000	3 250	4 660	149	96	57	34	3.1	6.2
	V4	8	575		3 560	2 840	4 120	94	63	54	30	3.6	7.2
	V3	7	500	50	3 200	2 520	3 600	90	43	50	26	4.1	8.2
	V2	5.5	390		2 610	2 020	2 820	85	23	44	19	5.3	10.6
	V1	4.4	305		2 140	1 640	2 220	85	14	39	<15	6.8	13.5
32E/32E HEE	V5	9.3	660		4 130	3 290	4 640	149	96	57	34	3.1	6.2
	V4	8	575		3 670	2 880	4 090	94	63	54	30	3.6	7.2
	V3	7	500	50	3 290	2 550	3 570	90	43	50	26	4.1	8.2
	V2	5.5	390		2 680	2 050	2 780	85	23	44	19	5.3	10.6
	V1	4.4	305		2 200	1 660	2 190	85	14	39	<15	6.8	13.5
34C/34C HEE	V5	9.3	660		3 720	3 120	3 890	149	96	57	34		
	V4	8	575		3 350	2 750	3 630	94	63	54	30		
	V3	7	500	50	3 020	2 450	3 350	90	43	50	26		
	V2	5.5	390		2 500	1 980	2 880	85	23	44	19		
	V1	4.4	305		2 080	1 620	2 460	85	14	39	<15		
34D/34D HEE	V5	9.3	660		4 070	3 290	5 130	149	96	57	34		
	V4	8	575		3 610	2 870	4 750	94	63	54	30		
	V3	7	500	50	3 230	2 540	4 350	90	43	50	26		
	V2	5.5	390		2 650	2 040	3 690	85	23	44	19		
	V1	4.4	305		2 170	1 650	3 110	85	14	39	<15		
42C/42C HEE	V5	8.4	775		4 900	3 870	5 200	166	87	55	29	2.7	5.3
	V4	7.3	630		4 140	3 200	4 370	103	54	52	25	3.3	6.5
	V3	6.2	535	50	3 620	2 770	3 760	99	35	48	21	3.8	7.7
	V2	4.7	405		2 850	2 160	2 910	89	18	42	16	5.1	10.2
	V1	3.7	315		2 270	1 700	2 260	84	11	38	<15	6.5	13.1
42D/42D HEE	V5	8.4	775		5 200	4 030	5 470	166	87	55	29	2.7	5.3
	V4	7.3	630		4 390	3 330	4 570	103	54	52	25	3.3	6.5
	V3	6.2	535	50	3 840	2 880	3 910	99	35	48	21	3.8	7.7
	V2	4.7	405		3 040	2 240	3 000	89	18	42	16	5.1	10.2
	V1	3.7	315		2 430	1 770	2 320	84	11	38	<15	6.5	13.1
42E/42E HEE	V5	8.4	775		5 460	4 140	5 550	166	87	55	29	2.7	5.3
	V4	7.3	630	50	4 590	3 410	4 610	103	54	52	25	3.3	6.5
	V3	6.2	535		4 000	2 950	3 940	99	35	48	21	3.8	7.7
	V2	4.7	405		3 160	2 290	3 020	89	18	42	16	5.1	10.2
	V1	3.7	315		2 520	1 810	2 330	84	11	38	<15	6.5	13.1
44C/44C HEE	V5	8.4	775		4 570	3 770	4 550	166	87	55	29		
	V4	7.3	630		3 900	3 130	4 110	103	54	52	25		
	V3	6.2	535	50	3 450	2 720	3 740	99	35	48	21		
	V2	4.7	405		2 760	2 130	3 160	89	18	42	16		
	V1	3.7	315		2 220	1 680	2 640	84	11	38	<15		
44D/44D HEE	V5	8.4	775		5 270	4 070	4 500	166	87	55	29		
	V4	7.3	630		4 430	3 360	4 060	103	54	52	25		
	V3	6.2	535	50	3 870	2 900	3 690	99	35	48	21		
	V2	4.7	405		3 070	2 260	3 110	89	18	42	16		
	V1	3.7	315		2 450	1 790	2 600	84	11	38	<15		

(1) Static pressures given for information purposes. For higher available static pressures, consult our sales office

(2) Warning: the air supply temperature must not exceed 65°C (CIAT recommendation)

U model sound level:

Values given as a guideline for devices with ducted return and discharge, and for room and installation attenuation of 19 dB (sizes 1 to 3), 21 dB (sizes 4)

OPTIONS (FACTORY-FITTED)

	Description	Figures	Description
OR	Condensate drain pump with high safety device		- Rectangular smooth metal supply air sleeve for Size 0 - Smooth metal rectangular return sleeve on all sizes (models I and Y only)

ACCESSORIES (SUPPLIED SEPARATELY)

	Description	Code		
	ø100 mm smooth collar	Code	7013442	
	ø125 mm smooth collar	Code	7013558	
	Self-adjustable fresh air module kit ø100 mm	Code	15/30/45 m³/h	7013440
		Code	60/75/90 m³/h	7013544
	Self-adjustable fresh air module kit ø125 mm	Code	15/30/45 m³/h	7013555
		Code	60/75/90 m³/h	7013556
	Resilient mounts (4 per unit)	Code	0219453	
	Condensate pan extension for recovery of condensates underneath the spigots except for size 0	Code	7158842	

Flexible connections for models I, Y, H, U and L

Assembly		Description	Code	Size 1, 2 and 3	Size 4 and 5	Size 6
For 2-tube coils						
without valve		2 M1 9 mm thick insulated flexible connections EPDM pipe + PN10 stainless steel braid length 300 mm Male coupling with flat face/Female rotary coupling on customer side	Code	2 x 5202288	2 x 7247867	2 x 7247867
3-way valve + by-pass		2 M1 9 mm thick insulated flexible connections EPDM pipe + PN10 stainless steel braid length 300 mm Rotary female couplings on both sides	Code	2 x 5202289	2 x 5202298	2 x 5202298
two-way valve		2 M1 9 mm thick insulated flexible connections EPDM pipe + PN10 stainless steel braid length 300 mm Including: 1 with male coupling with flat face / Female rotary coupling on customer side 1 with female rotary coupling on both sides	Code	5202288 + 5202289	7247867 + 5202298	2 x 7247867 + 2 x 5202298
Assembly		Description	Code	Size 1, 2 and 3	Size 4 and 5	Size 6
For 4-tube coils						
without valve		EPDM pipe + PN10 stainless steel braid length 300 mm Male coupling with flat face/Female rotary coupling on customer side HEATING: 2 non-insulated COOLING: 2 M1 9 mm thick insulated connections	Code	HEATING: 2 x 7247868 COOLING: 2 x 5202288	HEATING: 2 x 7247868 COOLING: 2 x 7247867	HEATING: 2 x 7401828
3-way valve + by-pass		EPDM pipe + PN10 stainless steel braid length 300 mm Rotary female couplings on both sides HEATING: 2 non-insulated COOLING: 2 M1 9 mm thick insulated connections	Code	HEATING: 2 x 7247837 COOLING: 2 x 5202289	HEATING: 2 x 7247837 COOLING: 2 x 5202298	HEATING: 2 x 7387851
two-way valve		4 EPDM pipe+PN10 stainless steel braid length 300 mm flexible connections, including: 2 with male coupling with flat face / Female rotary coupling on customer side 2 with female rotary coupling on both sides HEATING: 2 non-insulated COOLING: 2 M1 9 mm thick insulated connections	Code	HEATING: 7247868 + 7247837 COOLING: 5202288 + 5202289	HEATING: 7247868 + 7247837 COOLING: 7247867 + 5202298	HEATING: 1 x 7401828 + 1 x 7387851 COOLING: 1 x 7247867 + 1 x 5202298

SPECIFICATION TEXT

COMFORT LINE H or U model

Ductable comfort units must comply with standards and regulations in force, in particular: EN ISO 7730 (thermal comfort), EN 779 (filters), EN 1216 (water coils), EN 50022 (DIN rails), NF C15-100 (electrical components), NF S90-351 (health, airborne contamination control) and the circular DGS n°97/311 (disinfection of air conditioning systems). Eco designed in accordance with standard EN 14062 and in compliance with environmental certification ISO 14001. They will be manufactured according to the quality assurance standard ISO 9001, EUROVENT and will have the CE mark.

The frame will be designed in galvanised steel sheet metal and assembled with zinc-nickel plated steel fastenings. No rivet fastenings can be accepted to allow disassembly at the end of the unit's service life. Acoustic and thermal **insulation** will be provided on Size 0 by 10 mm of polyester textile fibre, and on Sizes 1 to 6 by 15 mm of melamine; a flexible open-cell foam with an aluminium covering to protect against dust build-up and make it easier to clean. The fire rating will be M1. No erodible insulation or insulation without a protective covering may be used. **It is essential that fine particles are not released, to protect the health of individuals and to comply with future European directives.**

The intake will be through one or more return grilles via a plenum with circular nozzles that can be connected to flexible ducting ($\varnothing 200$ mm as standard for all sizes, and also available in $\varnothing 160$ for Sizes 0 to 3 and $\varnothing 250$ for Sizes 4 and 5) to prevent any non-ducted return air within the suspended ceiling.

The air supply will come from a plenum with circular nozzles (collar diameters identical to the air supply diameters) ducted to one or more grilles that are correctly sized for optimised air distribution to ensure optimum comfort.

The EPURE function (air purification system) is to exceed the WHO's recommendations on particle removal, reducing PM2.5 particulates to below 10 $\mu\text{g}/\text{m}^3$ in less than an hour.

The unit is to be fitted with an air filter made of polypropylene with an M1 fire rating, that will not release glass fibres. The filter should be a high energy efficiency multi-pleated filter with a filter area of at least 10 times the intake surface area.

Its high retention capacity ensures an increased service life (flat filters will not be permitted). In order to reduce waste at the end of the service life, it must be able to be completely incinerated with no sorting of materials necessary. No modification of the frame should be necessary to replace the filter.

The water coil will be made of copper tubes and continuous fins in seamed aluminium. The connections should have couplings with integrated swivel nut to reduce the number of intermediate couplings, thereby reducing the risk of leaks (direct assembly of valves).

The coils will be equipped with air bleed and draining valves. They will be tested under extreme conditions with a minimum test pressure of 24 bar. In order to reduce energy consumption and simplify commissioning, it will be possible to fit them with automatically adjusted differential pressure valves to ensure the water flow rate is maintained, once it has been set with the manual handle.

The condensate pan under the coil and under the valves must be a single unit (no leaks) and made from non-corrodible polymer with an M1 fire rating. On Sizes 1 to 6, its patented design does not require it to be tilted. The coil rests on a central part of the pan, completely horizontal, and therefore with no bypass area. Condensates are drained through 2 steep channels either side of the coil. On all Sizes, the external part of the pan that collects condensate from the valves has an inverted slope to guide the condensate to the drain holes. This will eliminate any risk of spreading bacteria, which ensures perfect hygiene. The condensate outlet is to be raised (25 mm) to ensure a gravity drain. It must be possible to remove the pan from underneath the unit when required. As far as is possible, an installation without any condensate drain pumps is preferable (condensate gravity draining) to keep maintenance costs down. If a pump is necessary, **it must feature a high safety device enabling the cooling valve to be closed if high levels are detected.**

The additional electric heater running in 230V single-phase must be shielded with stainless steel. The unit is to be fitted with safety limiters that comply with the applicable standards.

The fan motor assembly, mounted on anti-vibration mounts, will be fitted with a Brushless technology low-consumption **HEE** motor. Single-phase 230V 50/60Hz, it may be controlled by a progressive control signal 0-10V or 3-speed ON/OFF with no need for an additional electronic board. It will be fitted with an automatic overload protection with alarm report via KNX bus. It will be fitted with 1 or 2 high energy efficiency **HEE** double inlet impellers with forward curved blades.

The fan motor assembly will be balanced on the production line to guarantee the G6.3 balance standard

An electrics box that is enclosed and of large dimensions, fitted with a DIN rail, will be able to accommodate and protect all the control components from dust. The safety of the electrical cables must be ensured using cable glands. The electrical and hydraulic feeds must both be on the same side to facilitate maintenance operations. Parallel control of 2 motors is prohibited. In order to ensure reliability, the control will be factory-fitted to eliminate any risks of leaks, for electrical safety and for the proper protection of components.

The clean fresh air inlet will be able to be ducted. Where possible, it shall be positioned in line with the air supply.

Resilient mounts will be placed between the unit's mountings and the threaded rods to prevent any transmission of noise.

Environmental report

An analysis of the life-cycle and the environmental implications will be available, in accordance with ISO 14040.

Eco-design should be a permanent consideration. The unit as a whole must be at least 94% recyclable. The unit must be easy to dismantle at end of life.

Guarantees

The manufacturer guarantees the equipment's performance, and will provide the documents attesting to the equipment's compliance with the attached specifications and with the STANDARDS, in particular the heating and cooling capacity (total and sensible), the air flow, the motor power input, the efficiency of the filters and the sound power spectrum.

Using a simulation tool, the manufacturer of the diffusion grilles must be able to give the relevant comfort indices or the values in compliance with the standard EN ISO 7730. The system start-up and maintenance guide for the unit must be in the language used in the country of installation. The manufacturer's technical specifications and the equipment's sound pressure must be given in the **documents to be appended to the submission**.

COMFORT LINE model LI or LY

Ductable comfort units must comply with standards and regulations in force, in particular: EN ISO 7730 (thermal comfort), EN 779 (filters), EN 1216 (water coils), EN 50022 (DIN rails), NF C15-100 (electrical components), NF S90-351 (health, airborne contamination control) and the circular DGS n°97/311 (disinfection of air conditioning systems). Eco designed in accordance with standard EN 14062 and in compliance with environmental certification ISO 14001. They will be manufactured according to the quality assurance standard ISO 9001, EUROVENT and will have the CE mark.

The frame will be designed in galvanised steel sheet metal and assembled with zinc-nickel plated steel fastenings. No rivet fastenings can be accepted to allow disassembly at the end of the unit's service life. Acoustic and thermal **insulation** is provided by 15 mm thick melamine; a flexible open-cell foam with a layer of aluminium foil to protect it from dust and make it easier to clean. The fire rating will be M1. No erodible insulation or insulation without a protective covering may be used. **It is essential that fine particles are not released, to protect the health of individuals and to comply with future European directives.**

Intake will be via a return panel with a micro perforated return grille integrated with the unit by an adjustable sleeve. Adjustment from 0 to 40 mm will be possible (no foul air from the suspended ceiling, improved hygiene, clean air). Nonducted return within the suspended ceiling is prohibited. It must be possible to provide access in less than 3 seconds to the filter via the RAL 9010 white return grille (opened with a tool for secure access) to ensure low maintenance costs. It must also be possible to remove the fan motor assembly without having to remove the unit.

For sizes 1 and 2, there are two possible grille dimensions:

- Standard panel 700 x 300 mm
- Optional panel 1200 x 300 mm with the unit centred or offset in relation to the panel

For sizes 3 and 4:

- Standard panel 1200 x 300 mm with the unit centred or offset in relation to the panel

The air supply will come via a double-deflection grille with Coanda effect, correctly sized by the manufacturer for optimum air diffusion for guaranteed comfort.

Depending on the case, the connection to this grille is either via a rectangular duct (LI assembly), or via a circular sound-absorbing duct ø160 mm (LY assembly).

The EPURE function (air purification system) is to exceed the WHO's recommendations on particle removal, reducing PM2.5 particulates to below 10 µg/m³ in less than an hour.

The unit is to be fitted with an air filter made of polypropylene with an M1 fire rating, that will not release glass fibres. The filter should be a high energy efficiency multi-pleated filter with a filter area of at least 10 times the intake surface area.

Its high retention capacity ensures an increased service life (flat filters will not be permitted). In order to reduce waste at the end of the service life, it must be able to be completely incinerated with no sorting of materials necessary. No modification of the frame should be necessary to replace the filter.

The water coil will be made of copper tubes and continuous fins in seamed aluminium. The connections should have couplings with integrated swivel nut to reduce the number of intermediate couplings, thereby reducing the risk of leaks (direct assembly of valves).

The coils will be equipped with air bleed and draining valves. They will be tested under extreme conditions with a minimum test pressure of 24 bar. In order to reduce energy consumption and simplify commissioning, it will be possible to fit them with automatically adjusted differential pressure valves to ensure the water flow rate is maintained, once it has been set with the manual handle.

The condensate pan under the coil and under the valves must be a single unit (no leaks) and made from non-corrodible polymer with an M1 fire rating. The patented design does not require it to be tilted. The coil rests on a central part of the pan, completely horizontal, and therefore with no bypass area. Condensates are drained through 2 steep channels either side of the coil. The external part of the pan that collects condensate from the valves has an inverted slope to guide the condensate to the drain holes. This will eliminate any risk of spreading bacteria, which ensures perfect hygiene. The condensate outlet is to be raised (25 mm) to ensure a gravity drain. It must be possible to remove the pan from underneath the unit when required. As far as is possible, an installation without any condensate drain pumps is preferable (condensate gravity draining) to keep maintenance costs down. If a pump is necessary, **it must feature a high safety device enabling the cooling valve to be closed if high levels are detected.**

The additional electric heater running in 230V single-phase must be shielded with **stainless steel**. It should be placed in front of the water coil in order to save energy (for simultaneous hot water and auxiliary electric heater usage). The unit is to be fitted with safety limiters that comply with the applicable standards. All electric heaters with incandescent wires or sacrificial fuses will be prohibited.

The fan motor assembly, mounted on anti-vibration mounts, will be fitted with a low-consumption **HEE** motor with BLAC (BrushLess Alternate Current) technology, which offers more linear torque progression and a lower operating sound level than BLDC (Brushless Direct Current) technology. All BLDC motors will be prohibited. Single-phase 230V 50/60Hz, it may be controlled by a progressive control signal 0-10V or 3-speed ON/OFF with no need for an additional electronic board. It will be fitted with an automatic overload protection with alarm report via KNX bus. It will be fitted with 1 or 2 high energy efficiency HEE double inlet impellers with forward curved blades.

The fan motor assembly will be balanced on the production line to guarantee the G6.3 balance standard

An electrics box that is enclosed and of large dimensions, fitted with a DIN rail, will be able to accommodate and protect all the control components from dust. The safety of the electrical cables must be ensured using cable glands. The electrical and hydraulic feeds must both be on the same side to facilitate maintenance operations. Parallel control of 2 motors is prohibited. In order to ensure reliability, the control will be factory-fitted to eliminate any risks of leaks, for electrical safety and for the proper protection of components.

The clean fresh air inlet will be ducted. Where possible, it shall be positioned in line with the air supply.

Resilient mounts will be placed between the unit's mountings and the threaded rods to prevent any transmission of noise.

Guarantees

The manufacturer guarantees the equipment's performance, and will provide the documents attesting to the equipment's compliance with the attached specifications and with the STANDARDS, in particular the heating and cooling capacity (total and sensible), the air flow, the motor power input, the efficiency of the filters and the sound power spectrum. Using a simulation tool, the manufacturer of the terminal units must be able to give the relevant comfort indices or the values in compliance with the standard EN ISO 7730. The system start-up and maintenance guide for the unit must be in the language used in the country of installation. The manufacturer's technical specifications and the equipment's sound pressure must be given in **the documents to be appended to the submission**.



COMFORT LINE

Comfort units

Ductable

This document is not legally binding. As part of its continuous drive to improve its equipment, CIAT reserves the right to make any technical modifications without prior notice.
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