



CLI-NOVO

Fan-coils



The NOVOVENT fan-coils are designed and developed for residential and commercial applications and they stand out for their small dimensions and easy installation.

CLI-NOVO series terminal units are available in 8 models with nominal air-flow rate from 500 TO 5.250 m³/h.

Because of their small size, this series is particularly suitable for false ceiling installation, with direct or ducted supply to room.

In their following base versions, they are supplied with water coil and fan:

Characteristics

- The casing is made from aluzink sheet metal.
- The unit acoustic and thermal insulation is obtained by an adequate thickness of polyethylene and polyester.
- Air filters are easily removable for cleaning or replacement.
- Ventiladores montados sobre soportes antivibratorios.
- Direct driven centrifugal fans with 3-speed motors; they are statically and dynamically balanced to reduce vibrations and noise.
- The unit is supplied with onboard electric connector (from 2000 up to 5100 model with relays).
- Motor IP 20, Class B, One phase, 50 Hz, 4 poles.
- Heating/cooling coil is Cu tubes and Al fins type with threaded connections.
- Stainless steel condensate drainage.
- The connections are provided with GAS.

CLI-NOVO V
vertical flow unit

CLI-NOVO H
horizontal flow unit



	Airflow rate m ³ /h			External static pressure Pa			1m sound pressure level dB (A)			Shaft power W	Max current A	Total cooling capacity ¹⁾ kW			Heating capacity ²⁾ kW			Water pressure drop ³⁾ kPa			Water flow rate ⁴⁾ m ³ /h			Coil rows n°
	máx.	med.	mín.	máx.	med.	mín.	máx.	med.	mín.			máx.	med.	mín.	máx.	med.	mín.	máx.	med.	mín.	máx.	med.	mín.	
CLI-NOVO 100	950	880	760	60	57	51	54,1	51,1	49,8	90	1	4,3	4,1	3,7	9,8	9,2	8,2	28	26	22	0,74	0,70	0,64	3
CLI-NOVO 150	1.500	1.250	1.000	105	99	95	52,7	50,9	49,1	147	1,9	7,0	6,3	5,4	15,8	13,7	11,4	21	17	13	1,20	1,07	0,93	3
CLI-NOVO 160	1.600	1.350	1.100	70	64	64	52,9	51,1	48,6	147	1,9	8,9	8,0	6,8	18,7	16,2	13,6	27	23	17	1,52	1,37	1,17	4
CLI-NOVO 210	2.100	1.350	700	100	85	70	56,3	49,5	42,9	184	2,6	9,4	7,1	4,3	21,4	15,2	8,7	28	17	7	1,61	1,21	0,74	3
CLI-NOVO 240	2.400	1.450	800	100	83	59	56,3	49,2	42,5	184	2,6	11,1	8,1	5,2	25,0	16,8	10,0	28	16	8	1,90	1,38	0,89	3
CLI-NOVO 340	3.400	2.200	1.400	120	80	63	58,8	54,0	42,9	420	3,9	14,3	10,9	8,1	33,5	24,1	16,6	22	14	8	2,44	1,86	0,89	3
CLI-NOVO 380	3.800	3.300	2.700	130	110	100	58,8	52,4	44,8	600	5,5	18,9	17,4	15,2	41,7	37,3	31,7	32	28	22	3,24	2,98	2,61	4
CLI-NOVO 420	4.200	3.450	2.800	125	110	105	58,9	51,8	44,5	600	5,5	22,3	19,5	16,9	47,5	40,5	33,9	30	24	19	3,82	3,34	2,90	4

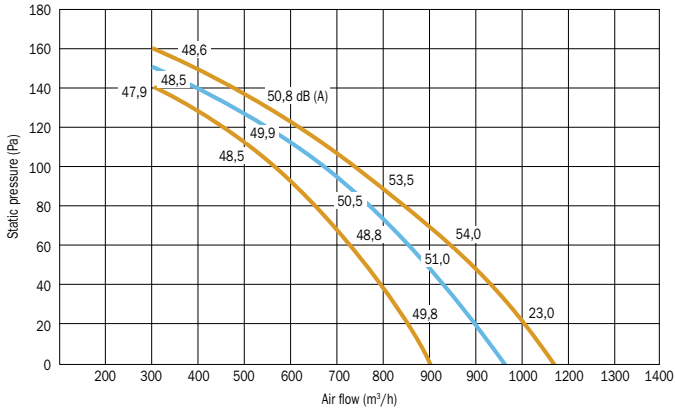
1) Inlet air conditions 27°C dB 19°C wb. Water temperature 7°/12°C.

2) Inlet air temperature 20°C dB. Heating inlet water 70°C out 60°C.

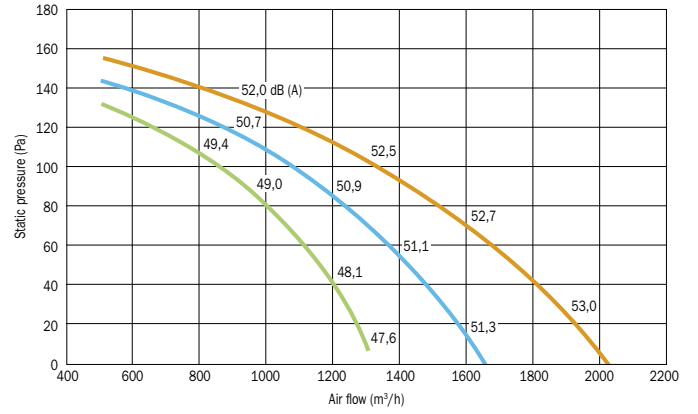
3) Pressure drop evaluated during cooling.

4) Refrigeration water delivery.

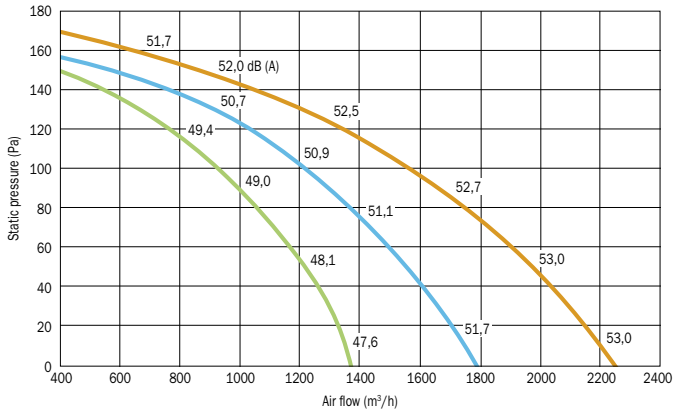
CLI-NOVO 100



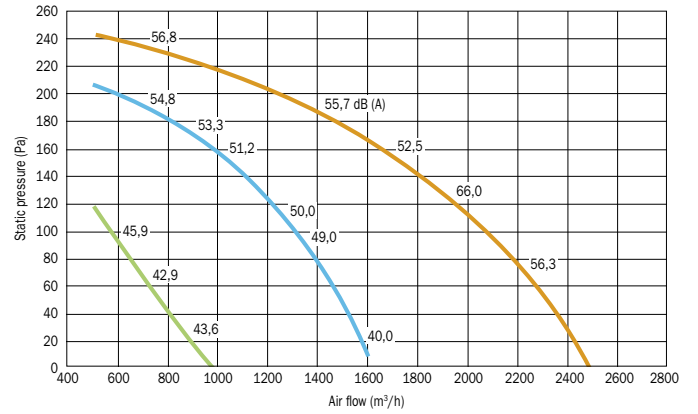
CLI-NOVO 150



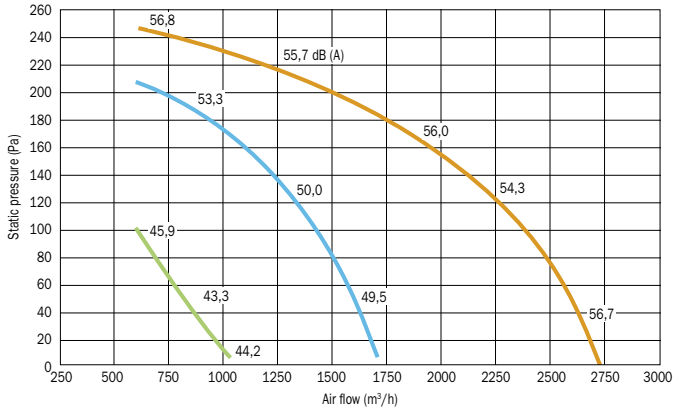
CLI-NOVO 160



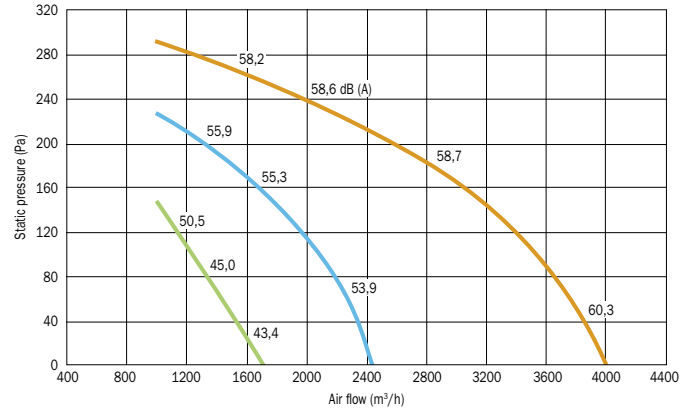
CLI-NOVO 210



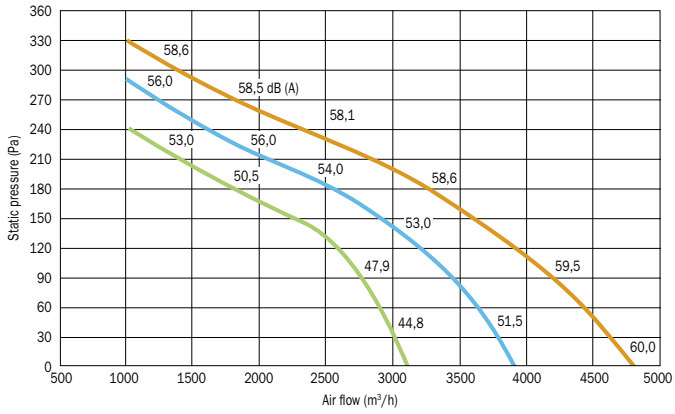
CLI-NOVO 240



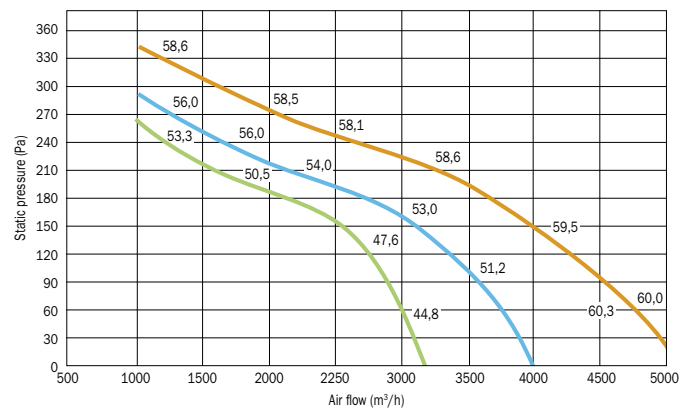
CLI-NOVO 340



CLI-NOVO 380



CLI-NOVO 420



- maximum speed
- medium speed
- low speed

Post-heating water section (CW)

The CW section is supplied if post-heating is required and is fixed directly to the delivery of the basic unit. This section is made from a plenum chamber containing a heat exchange unit made of copper pipes, aluminium finning and breather valve.

	Inlet / outlet water temperature °C	Inlet air temperature °C				
		10 kW	16 kW	19 kW	20 kW	21 kW
CW 100	80/70	11,73	10,61	10,04	9,86	9,67
	70/60	9,75	8,63	8,06	7,88	7,69
CW 150	80/70	19,43	17,59	16,67	16,37	16,06
	70/60	16,23	14,39	13,47	13,16	12,85
CW 160	80/70	20,21	18,39	17,43	17,11	16,78
	70/60	19,96	15,04	14,07	13,75	13,43
CW 210	80/70	26,05	23,57	22,33	21,92	21,51
	70/60	21,73	19,26	18,02	14,60	17,19
CW 240	80/70	32,20	29,17	27,66	27,15	26,65
	70/60	26,95	23,93	22,41	21,91	21,40
CW 340	80/70	40,65	36,77	34,84	34,20	33,55
	70/60	33,90	30,03	18,20	27,46	26,81
CW 380	80/70	43,72	39,56	37,47	36,77	36,08
	70/60	36,45	32,29	30,20	29,50	28,81
CW 420	80/70	50,99	46,18	43,77	42,96	42,17
	70/60	38,85	37,85	35,44	34,63	30,69

Kwt = Total heating capacity (kW). Values refer to nominal air capacity.

For capacities corresponding to the maximum and medium speed the unit thermal yield may be determined by applying the following formula: **PQ = PQNom • K**

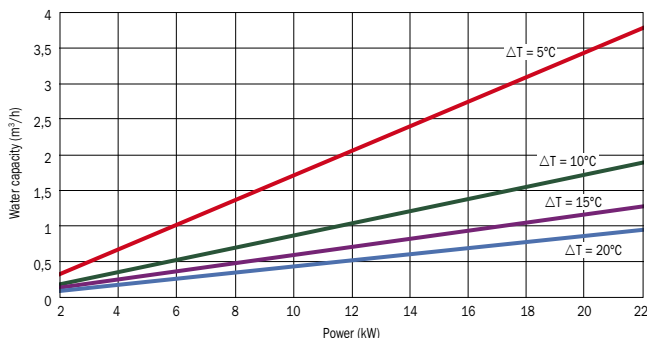
When: PQnom = Useful capacity exchanged in kW in the above table.

PQ = Useful capacity exchanged in kW at minimum or intermediate capacity.

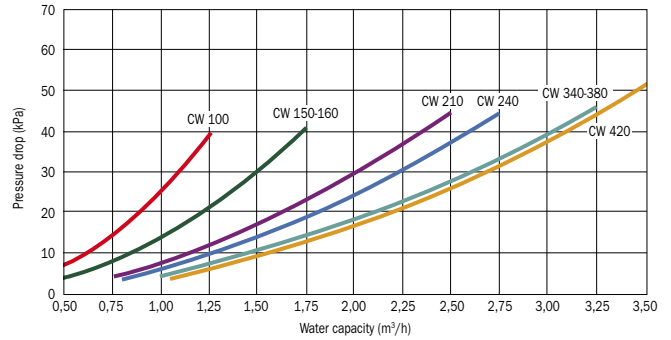
K = The values given in the following table in function of the air flow.

Corrective coefficients K							
100		150		160		210	
m³/h	K	m³/h	K	m³/h	K	m³/h	K
650	0,77	1000	0,75	1100	0,77	1400	0,75
800	0,89	1250	0,88	1350	0,89	1750	0,88
950	1,00	1500	1,00	1600	1,00	2100	1,00
1000	1,03	1800	1,13	1900	1,08	2300	1,06
240		340		380		420	
m³/h	K	m³/h	K	m³/h	K	m³/h	K
1600	0,75	1800	0,64	2300	0,71	2500	0,70
2100	0,91	2800	0,88	3300	0,91	3500	0,89
2400	1,00	2400	1,00	3800	1,00	4200	1,00
2600	1,06	2700	1,06	4300	1,08	14700	1,08

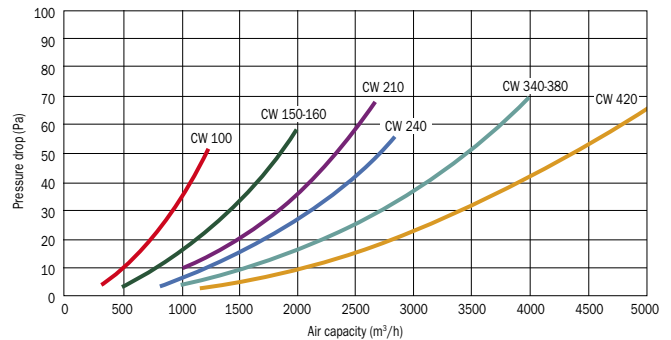
The water capacity value is taken from diagram knowing the power yielded (kW) and the thermal difference between the water inlet and outlet in the unit:



Water pressure drop may be calculated by applying this capacity:

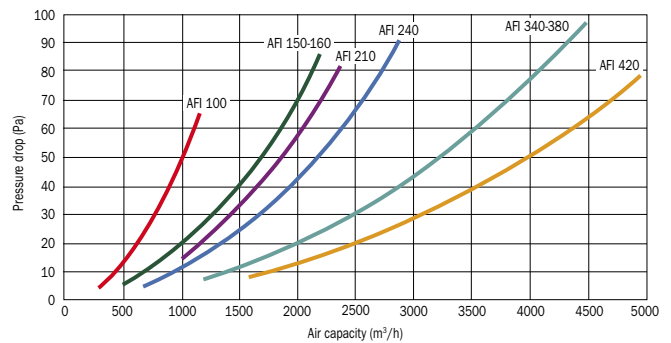


CW Section air side pressure drop:



Filtering section (AFI)

It is made from a regenerable G3 or G4 class filter, and is necessary whenever it is not possible to install a filter in the suction grid; this accessory also allows easy connection between the PLA and the unit. The filter is extracted from the bottom for the horizontal unit versions and from the top for the vertical unit versions. The air side pressure drop is given in the diagram.



Return air grille (RAR)

With 45° inclination fixed finning, it is installed directly on the suction plenum chamber PLA.

Suction plenum chamber (PLA)

The suction plenum chamber PLA is installed before the base unit and allows air aspiration both horizontally and vertically from below.

Mixing section (SM/SM2)

This allows the mixing of external and recycled air. The regulation of the renewal air occurs through a joined shutter, motorized if needed. 2-damper mixing box the version SM2.

Adiabatic humidifier section (SHA)

Air intake section with damper (CEA)

Nozzles with adjustable finning (RD)

This is connected to the PLD delivery plenum chamber, or to the post-heating section, the funnel with regulable fins has the function of delivering the air directly into the room.

Fan speed control (RG)

Suitable for wall installation, it allows to select one of the possible fan speeds.

Power supply	230 ± 10% Vac 50/60Hz
Temperatura limits	0°C - 50°C
Relative humidity limits	20 - 90% without condens
Protection degree	IP20

Unit control panel (RR)

Suitable for wall installation, it allows to control the room temperature (on/off control) both in summer and winter mode and to select the fan speed; the temperature sensor can be eventually far from the wall panel.

Power supply	230 ± 10% Vac 50/60Hz
Temperatura range	6°C / 30°C
Sensor temperature	0,5°C ± 0,1°C
Temperatura limits	0°C - 50°C
Relative humidity limits	20 - 90% without condens
Protection degree	IP20

Delivery plenum chamber (PLD)

The delivery plenum chamber is supplied for all cases where air distribution uniformity is required.

Flexible ducts plenum chamber (PCF)

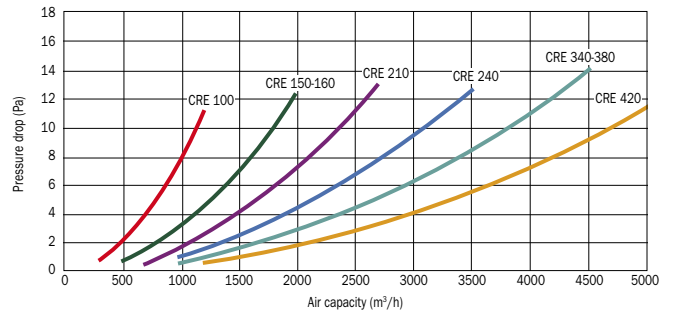
This section is ideal for simple and quick connections from the unit to flexible ducts for the distribution of treated air in the room. The PBC section is made from a plate frame with 2, 3 or 4 specially sized circular rings.

Delivery flange (CJE)

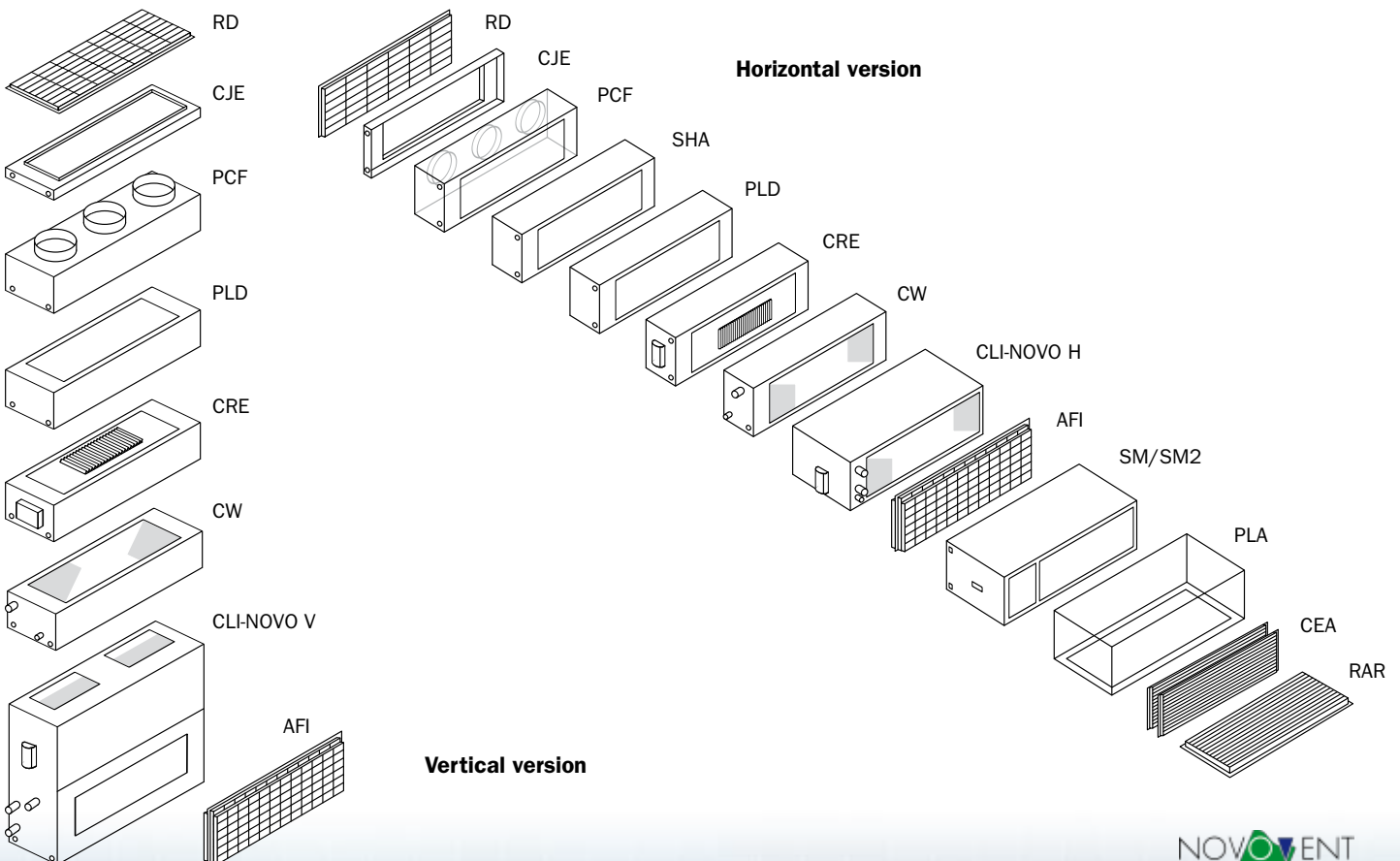
This section has the aim of making the connections between the unit and circuit easy.

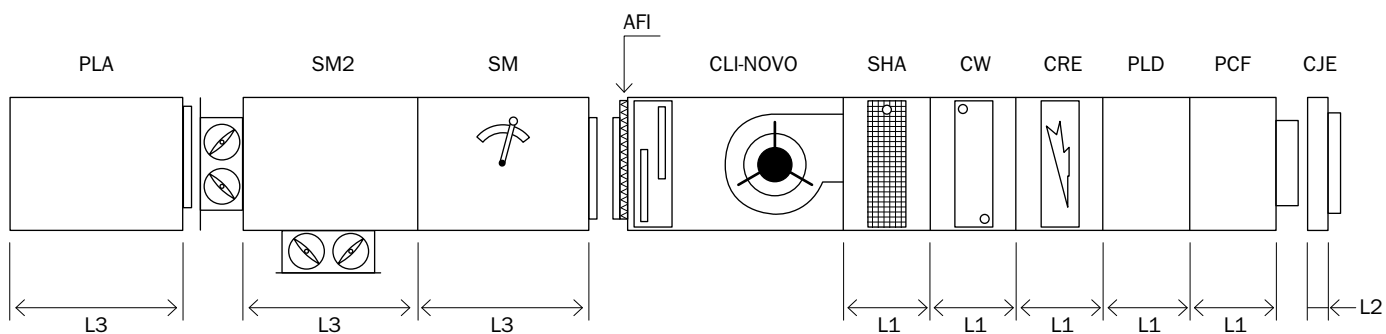
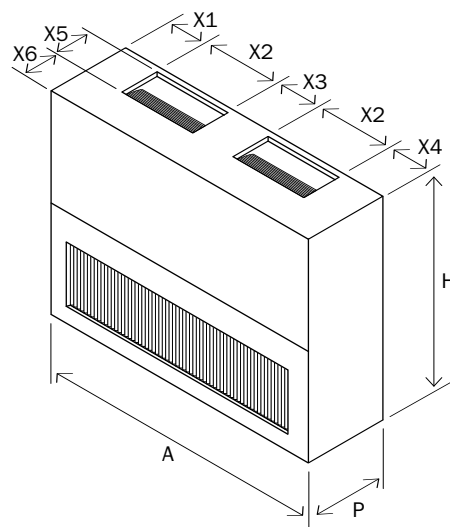
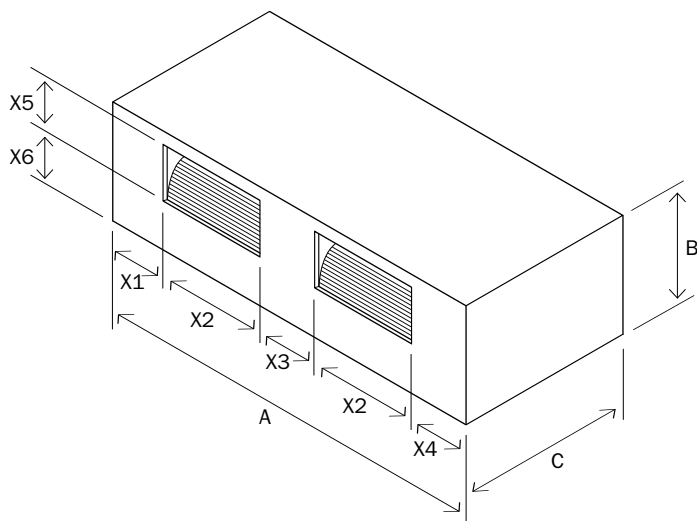
Post-heating electrical section (CRE)

The CRE section is supplied if a post-heating is required and the water cannot be used. This section consists of a plenum chamber containing the modular heating elements able to supply the powers described. These elements having a reduced thickness allow air flow to be reduced to a minimum. The heating section with electrical heating elements requires a 400/3/50 three-phase power supply and may be controlled by the RR control panel and is supplied complete with safety thermostats and command relay. The power supply line protection must be installed by the installer.



Configurations





	A	B	C	H	P	X1	X2	X3	X4	X5	X6	Kg ¹⁾	Kg ²⁾	L1 ³⁾	L2 ³⁾	L3 ³⁾
CLI-NOVO 100	640	295	450	750	295	135	306	-	199	137	140	23	30	200	50	400
CLI-NOVO 150	1000	295	450	750	295	139	290	186	95	135	136	33	45	200	50	400
CLI-NOVO 160	1000	295	450	750	295	139	290	186	95	135	136	36	48	200	50	400
CLI-NOVO 210	1100	322	500	835	322	159	306	170	159	151	144	40	54	200	50	400
CLI-NOVO 240	1340	322	535	950	322	279	306	170	279	152	143	48	63	200	50	400
CLI-NOVO 340	1340	372	535	950	322	237	328	210	237	238	114	55	72	200	50	400
CLI-NOVO 380	1340	372	535	950	372	237	328	210	237	238	114	60	75	200	50	400
CLI-NOVO 420	1640	372	535	950	372	387	328	210	387	238	114	71	86	200	50	400

1) Weight of horizontal version
 2) Weight of vertical version
 3) Accessories



SISTEMAS VENTILACIÓN Y CLIMATIZACIÓN

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