



Horizontal compact
 Reduced dimensions
 Centrifugal fans
 Ducted intake and discharge

DESCRIPTION

Heat Pumps and Cooling Units **Hcompact L Series** Air-Air horizontal packaged units of monobloc compact construction. They should be placed inside a building, safe from external damages, with access registers to fans, cooling circuit and electrical panel with easy removable panels. All units are tested and checked in factory.

They are suitable for medium power installations, appropriated for commercial and industrial applications where the aesthetics of the facade should be preserved.

SERIES

Hcompact RL Series

Air/air **cooling** packaged units with horizontal compact construction.

Hcompact IL Series

Air/air **reversible** heat pumps packaged units with horizontal compact construction.

RANGE

Hcompact RL - IL Series: 1 cooling circuit, 1 hermetic compressor, 8 models:

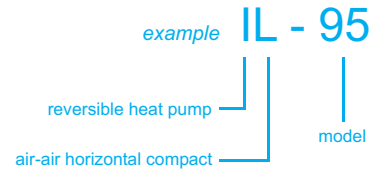
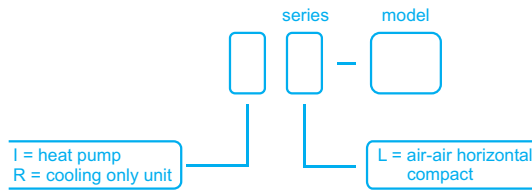
- 30 / 40 / 50 / 65 / 80 / 95 / 120 / 155

OPERATING LIMITS

AIR INLET CONDITIONS		COOLING	HEATING
INTERNAL COIL	MIN.	14 °C WB	10 °C
	MAX.	21 °C WB	27 °C
EXTERNAL COIL	MIN.	12 °C (*)	-7 °C WB
	MAX.	43 °C	15 °C WB

(*) For units equipped with condensing pressure control, operating limit up to -7°C.

DESIGNATION



UNITS COMPOSITION

Standard equipment

- Casing in galvanised metal plate with polyester paint dried to the furnace and thermally isolated. Chassis support.

External circuit

- Centrifugal fan driven by belts and pulleys (except for model 30, which is directly driven).
- Protection grille, in discharge.
- Condensates drain pan with asphalt paint. Independent drainage.
- Coil with copper tubes and aluminium fins.

Internal circuit

- Internal circuit centrifugal fan, driven by belts and pulleys (except models 30 and 40 driven directly).
- Washable air filter.
- Condensates drain pan with asphalt paint. Independent drainage.
- Coil with copper tubes and aluminium fins.

Cooling circuit

- Piston hermetic compressor with gas discharge silencer, mounted on anti-vibratory supports. Thermal protection.
- Thermostatic expansion valve with external pressure equalization (models RL 30 and 40 expansion by restrictor).
- Four ways reverse-cycle valve and crankcase heater (IL series).
- Anti-acid dryer filter.

Protections

- HP pressostat.
- Door main switch.
- Control circuit automatic switch.

- Compressor and motorfans line protection fuses.
- Fans thermal protection.

Electrical panel

- Complete electrical panel, totally wired.
- Ground plug.
- Motorfans and compressor contactors.

GESCLIMA electronic control (consult manual)

Control system with microprocessor composed by:

Control board

- Defrosting operation by external freon probe.
- Anti-frost operation by internal freon probe.
- 3 speeds internal fan (models 30, 40M and 40).
- Low pressure safety by temperature probe.
- High pressure safety by pressostat.
- Lack of freon detection test and probes failure.
- Anti-short-cycle timing.
- Communication board to integrate in a building management system BMS with Modbus protocol (optional).

Ambient thermostat: DOMO

- Operating modes: ventilation, cooling, heating, economic heating, automatic and dehumidification.
- Internal fan speed selection (models 30, 40M and 40).
- Set points, time and ambient temperature display.
- Modification of operating parameters (set points, differential and timings).
- Time and daily scheduling. Night reduction mode.
- Alarm display.

OPTIONS

- Position of discharge of internal and/or external circuit.
- Coils of copper tubes and copper fins, or aluminium fins with polyurethane coating.
- Options for control and other controls.
- Compressor acoustic isolation.
- Optional electrical heaters.
- Hot water coil.
- Fouled filters differential pressostat.
- Condensing pressure control.
- Starter kit (monophasic models).
- Rubber antivibratory supports.
- Control system by ECONFORT zones.

Control system by ECONFORT zones

It allows to control up to 11 independent temperature zones, including:

- RL / IL unit.
- Relays board(s).
- Grilles or motorized dampers.
- **ECONFORT** incorporates **Zone Thermostats** (1 by zone) with the following functions:
 - On-off switch.
 - Display with ambient temperature.
 - Set point selection.
 - Operating display (green led: cold; red: heat).

SOUND PRESSURE AND POWER LEVEL

A) **Sound power level** in the external fan discharge, should be taken into account for the silencer calculation:

RL - IL	30	40M	40	50	65	80	95	120	155
dB(A)	73,0	77,4	77,4	80,5	82,7	74,4	76,3	83,5	83,3

B) **Sound power** in the internal fan discharge, should be taken into account for the silencer calculation:

RL - IL	30	40M	40	50	65	80	95	120	155
dB(A)	75,5	77,0	77,0	72,0	77,4	80,4	77,1	79,2	77,1

C) **Unit sound pressure level**, with the ducted discharge and intake, at 5 m., in free field, directivity 2 and at 1,5 m. distance from floor is:

RL - IL	30	40M	40	50	65	80	95	120	155
dB(A)	58,7	64,5	64,5	69,3	71,6	69,4	70,8	70,7	71,2

NOTE: The sound pressure level depends on the installation conditions and therefore, it is given only as an approximate guide.

TECHNICAL CHARACTERISTICS

Hcompact L Series		30	40M	40	50	65	80	95	120	155
Cooling capacities	Cooling capacity ① (kW)	6,8	8,4	8,4	11,6	15,0	18,9	22,1	28,6	36,3
	Power input ③ (kW)	3,0	3,9	3,9	5,2	6,7	8,8	10,0	12,6	16,1
	EER Performance	2,3	2,2	2,2	2,2	2,2	2,1	2,2	2,3	2,3
Heating capacities	Heating capacity ② (kW)	7,2	9,5	9,5	11,7	15,4	19,4	22,9	29,6	37,6
	Power input ③ (kW)	2,4	3,5	3,5	4,4	6,0	7,3	8,1	10,4	13,4
	COP Performance	3,0	2,7	2,7	2,7	2,6	2,7	2,8	2,8	2,8
External circuit fan	Nominal air flow (m ³ /h)	2.500	3.500	3.500	4.100	4.600	6.500	7.000	10.000	12.200
	Avail. static pressure (mm.W.G.)	5	8	8	10	5	7	7	13	14
	Type	Centrifugal								
	Number	1								
	Power (kW)	0,245	0,55	0,55	1,1	1,1	1,1	1,5	1,5	3
	r.p.m.	800	943	943	1.005	1.035	630	680	543	626
Internal circuit fan	Nominal air flow (m ³ /h)	1.500	2.000	2.000	2.500	3.100	4.000	4.600	6.000	7.000
	Avail. static pressure (mm.W.G.)	5	4	4	6	9	11	8	12	10
	Type	Centrifugal								
	Number	1								
	Power (kW)	0,245	0,245	0,245	0,55	0,75	1,1	1,1	1,1	1,5
	r.p.m.	800	800	800	853	1.061	1.030	853	671	721
Compressor	Type	Piston hermetic								
	Number	1								
	Number of circuits	1								
Maximum power inputs	230 V / I ph / 50 Hz (A)	27,1	38,9	--	--	--	--	--	--	--
	230 V / III ph / 50 Hz (A)	--	--	25,8	25,5	31,5	38,4	45,8	53,8	69,0
	400 V / III ph / 50 Hz (A)	--	--	14,1	19,3	19,8	28,4	28,3	33,3	46,5
Refrigerant	Type	R-407c								
	RL Load (kg)	2,0	2,2	2,2	2,8	3,0	4,3	4,7	4,6	4,4
	IL Load (kg)	2,2	2,4	2,4	3,0	3,2	4,5	4,9	4,7	6,2
	Climate warming potential (CWP) ④	1652,5								
Dimensions	Length (mm)	1.294	1.294	1.294	1.484	1.484	1.825	1.825	2.481	2.481
	Width (mm)	965	965	965	1.105	1.105	1.445	1.445	1.911	1.911
	Height (mm)	530	530	530	575	575	701	701	820	820
Weight	RL (kg)	165	181	181	224	240	345	390	468	517
	IL (kg)	170	187	187	233	252	359	405	480	530
Condensates draining Ø		3/4"								

① Cooling capacity for internal temperature conditions 27 °C, 50 % RH (19 °C WB) and 35 °C of external temperature.

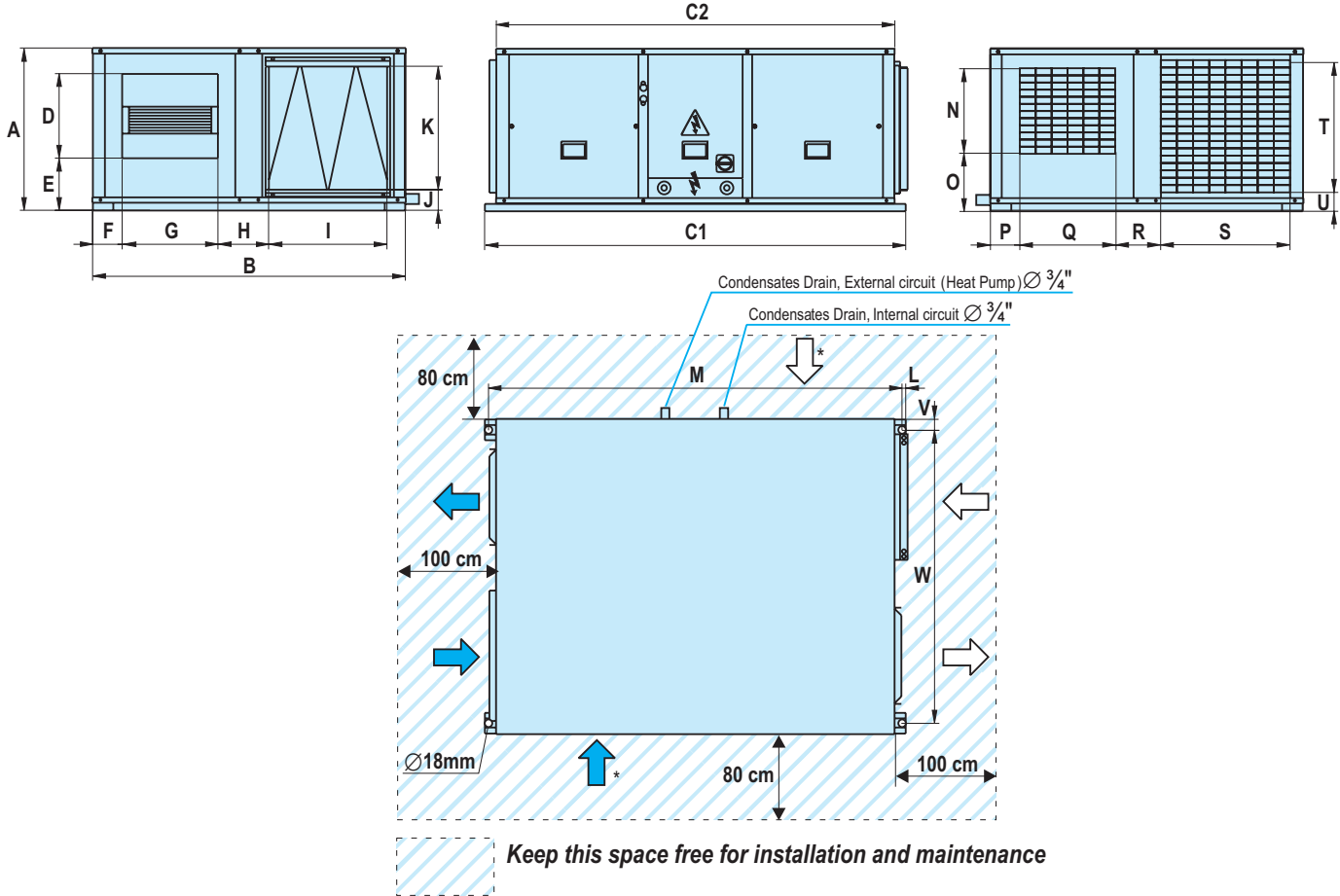
② Heating capacity for internal temperature conditions 21 °C and 6 °C WB of external temperature.

③ Compressor and motorfans power input in nominal conditions.

④ Climate warming potential of one kg of greenhouse-effect fluored gas relative to one kilogram of carbon dioxide over a period of 100 years.

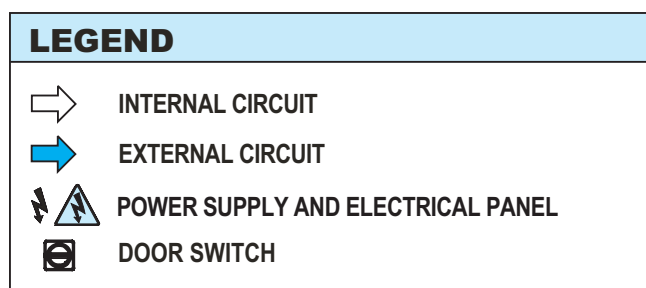
DIMENSIONS SCHEME RL - IL SERIES (mm)

RL / IL MODELS - 30 / 40 / 50 / 65 / 80 / 95

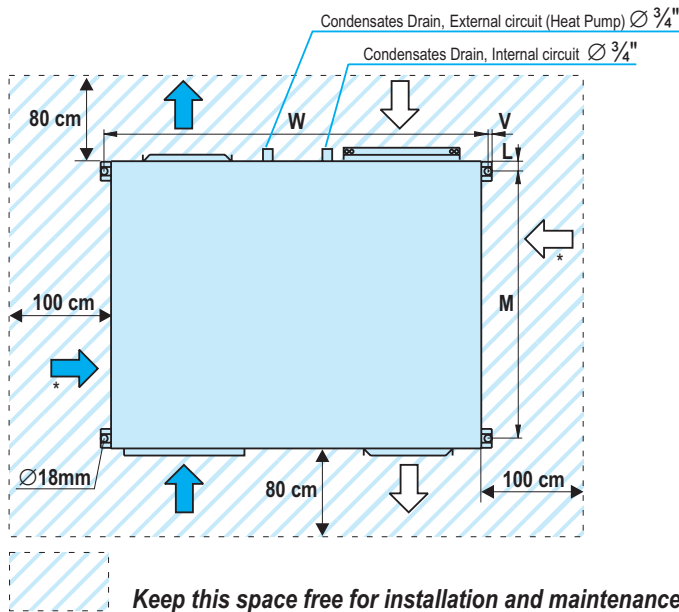
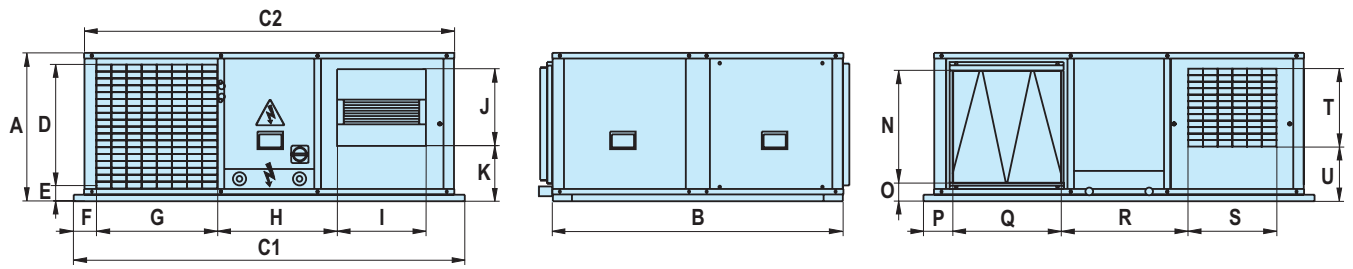


MOD.	A	B	C1	C2	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
30	530	965	1294	1215	270	155	88	306	131	377	74	394	14	1266	297	185	75	339	114	392	425	62	37	890
40	530	965	1294	1215	297	168	75	339	131	377	74	394	14	1266	297	185	75	339	114	392	425	62	37	890
50	575	1105	1484	1405	297	189	106	339	168	440	79	431	14	1456	297	209	75	339	160	456	463	70	37	1030
65	575	1105	1484	1405	297	189	106	339	168	440	79	431	14	1456	297	209	75	339	160	456	463	70	37	1030
80	701	1445	1825	1745	297	171	195	339	268	604	96	522	14	1797	410	235	124	475	194	608	573	67	39,5	1366
95	701	1445	1825	1745	349	171	159	403	240	604	96	522	14	1797	410	235	124	475	194	595	573	67	39,5	1366

(*) Both in the internal air circuit and in the external circuit, the return panel can be located in any of the two positions indicated in the previous drawing, since both panels are easily interchangeable, with the purpose of leaving it on site at the convenience of each installation.



RL / IL MODELS - 30 / 40 / 50 / 65 / 80 / 95 (OPTIONAL ASSEMBLY)

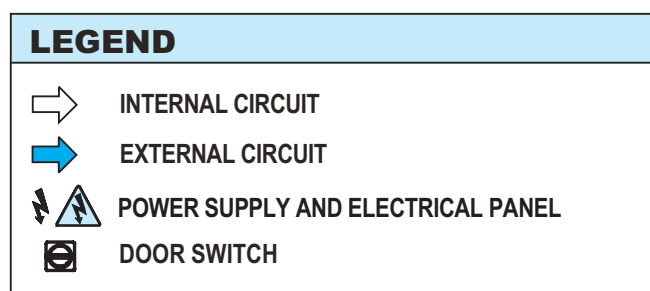


MOD.	A	B	C1	C2	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
30	530	965	1294	1215	425	62	85	392	378	306	270	155	37	890	394	74	103	377	380	339	297	185	14	1266
40	530	965	1294	1215	425	70	85	392	363	339	297	198	37	890	394	74	83	377	380	339	297	214	14	1266
50	575	1105	1484	1405	463	70	115	456	459	339	297	211	37	1030	431	79	92	440	467	339	297	193	14	1456
65	575	1105	1484	1405	463	70	115	456	459	339	297	211	37	1030	431	79	92	440	467	339	297	193	14	1456
80	701	1445	1825	1745	573	67	84	608	494	339	297	171	39,5	1366	522	96	79	604	568	475	410	235	14	1797
95	701	1445	1825	1745	573	67	84	608	494	403	349	171	39,5	1366	522	96	79	604	540	475	410	235	14	1797

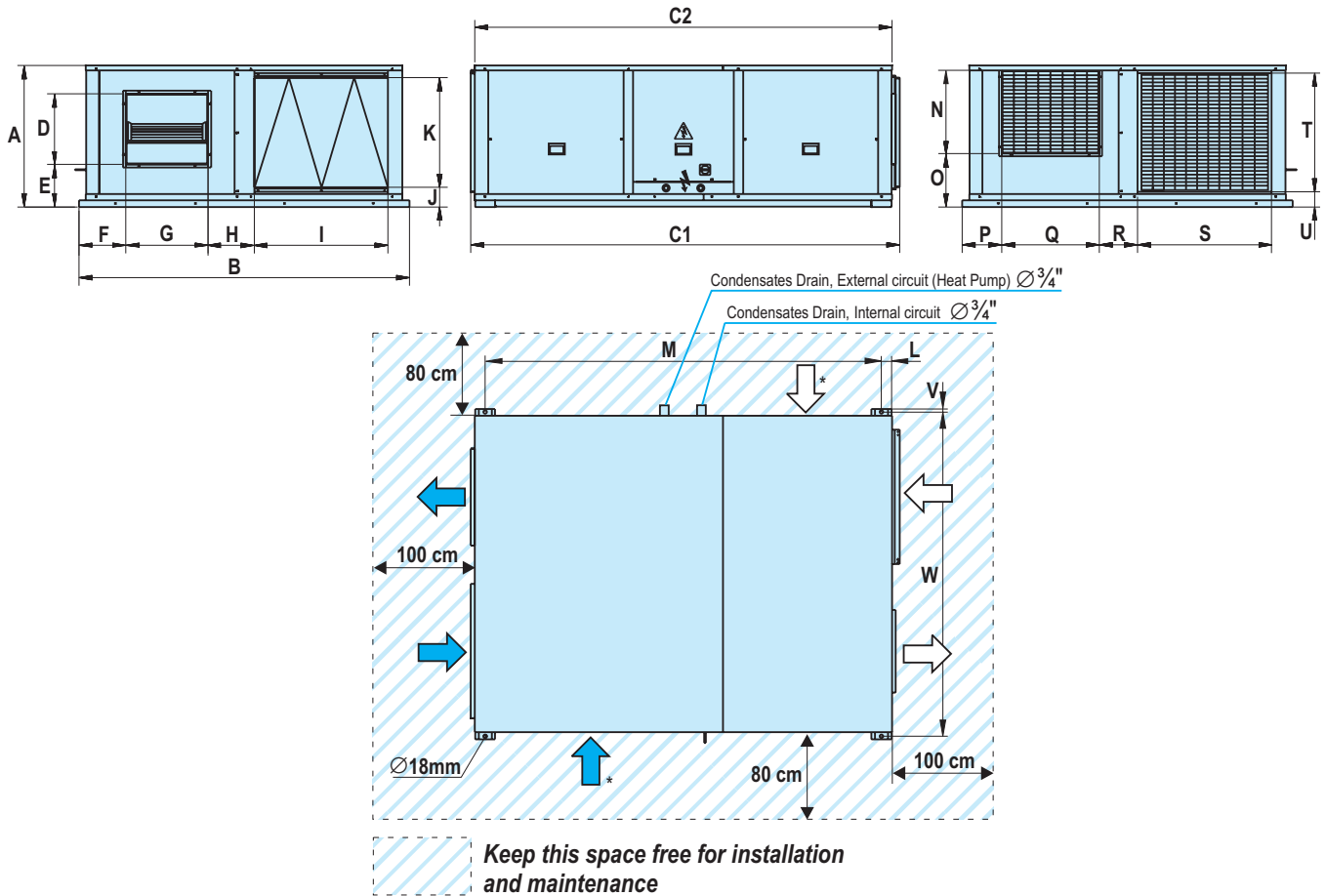
(*) Both in the internal air circuit and in the external circuit, the return panel can be located in any of the two positions indicated in the previous drawing, since both panels are easily interchangeable, with the purpose of leaving it on site at the convenience of each installation.

NOTE: For optional assembly of external fan:

- For H compact L - 40 model it is necessary to change the model of the fan.
- For H compact L - 50 and 65 models it is not possible to install the motor of 1,1 kW.

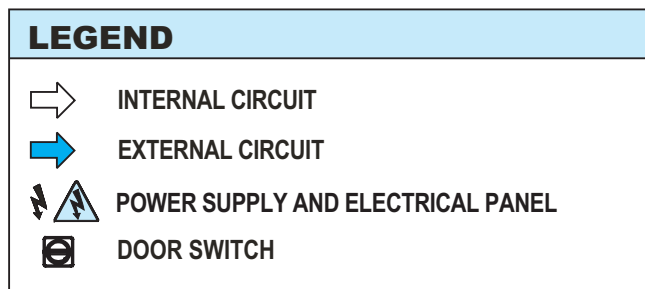


RL / IL MODELS - 120 / 155

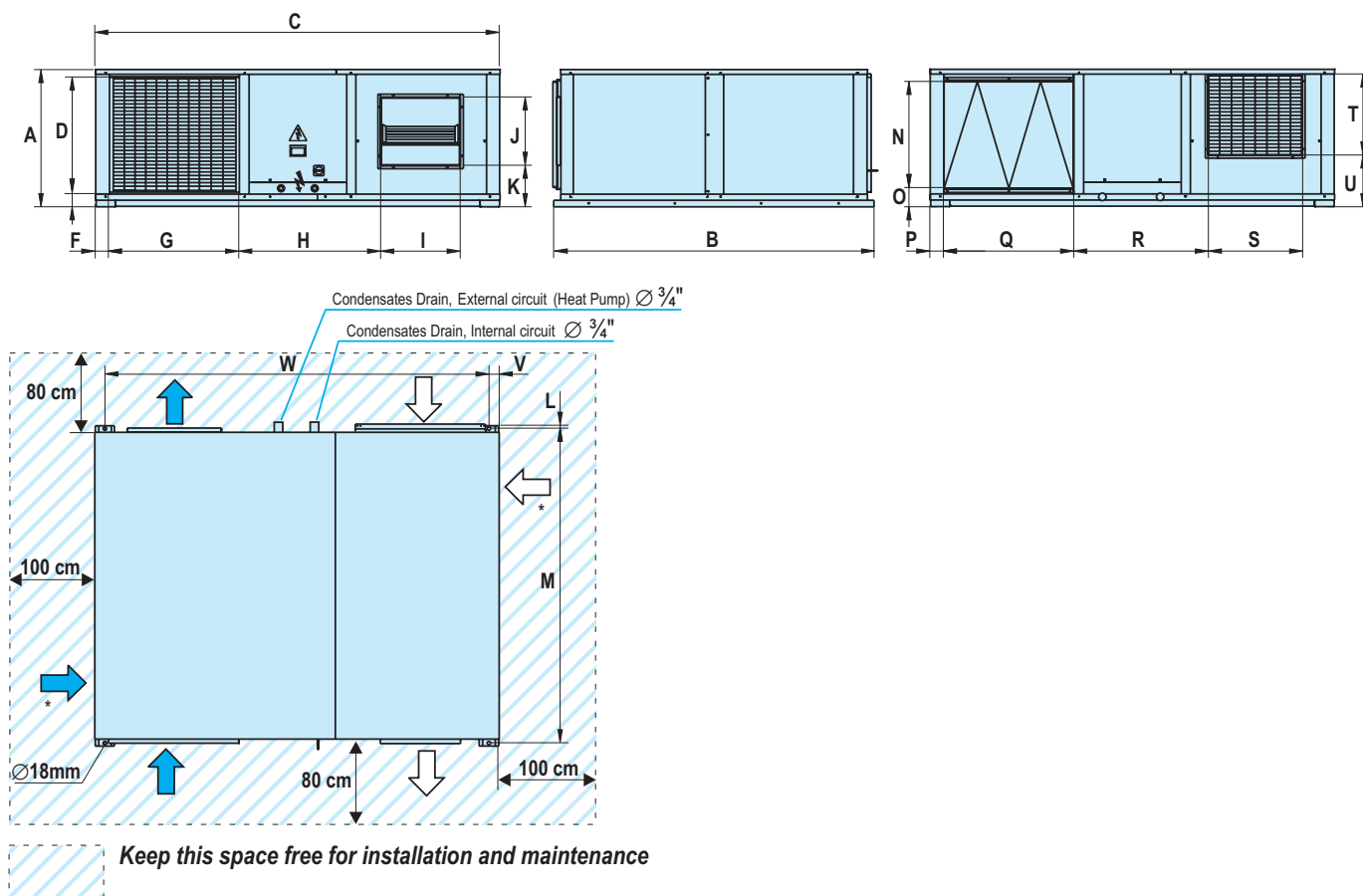


MOD.	A	B	C1	C2	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
120	820	1911	2481	2412	410	247	272	477	265	778	115	633	60,5	2291	484	309	228	564	221	778	687	87	17,5	1876
155	820	1911	2481	2412	410	247	272	477	265	778	115	633	60,5	2291	484	309	228	564	221	778	687	87	17,5	1876

(*) Both in the internal air circuit and in the external circuit, the return panel can be located in any of the two positions indicated in the previous drawing, since both panels are easily interchangeable, with the purpose of leaving it on site at the convenience of each installation.



RL / IL MODELS - 120 / 155 (OPTIONAL ASSEMBLY)



MOD.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
120	820	1911	2412	687	87	81	778	845	475	410	247	17,5	1876	633	115	81	778	801	564	484	309	60,5	2291
155	820	1911	2412	687	87	81	778	845	475	410	247	17,5	1876	633	115	81	778	801	564	484	309	60,5	2291

(*) Both in the internal air circuit and in the external circuit, the return panel can be located in any of the two positions indicated in the previous drawing, since both panels are easily interchangeable, with the purpose of leaving it on site at the convenience of each installation.

