



OPTICLEAN™ 39UV AIR SCRUBBER



AIR SCRUBBER

Portable solution

Multi purpose
Recirculation or negative air
machine

AIR SCRUBBER

HEPA filters with M5 pre-filter

Provides safety conditions for
locals without fresh air entry

Multiple applications :
commercial, healthcare, retail,
education, hotel

OptiClean™ 39UV

- 3 models
- Pre-filter pleated synthetic material, M5
- High efficient long-life HEPA filters
- Nominal airflow 1000 – 1800 – 2500 m³/h
- Vertical design for smaller footprint compared to many competitors
- Portable and adaptable to nearly any installation
- Heavy duty locking casters for easy and smooth transport
- Red lighted indicator to alert user when filters are overloaded (generally means maintenance is required)
- 2.5 meters long power cord with strain relief
- Power cable access from rear of the unit
- Plug F / G / J type
- 230V / 50hz / 1Ph Power
- Chassis is made from galvanized steel, pre-painted and fully insulated
- Exhaust transition plate as an option
- Diffusion acoustic plenum

STANDARD FEATURES OPTICLEAN™ 39 UV

The OptiClean™ 39UV AIR SCRUBBER machine is currently designed for commercial, healthcare and administrative applications.

Negative air operation mode

The OptiClean™ 39UV negative air machine is a portable solution primarily designed to help convert normal hospital rooms into Airborne Infectious Isolation (All) rooms. Designed to improve indoor air quality for those installations that have no possibility of fresh air inlet, OptiClean™ 39UV uses highly efficient filters and a heavy duty, yet quiet, motor to remove contaminated air from the room. The resulting negative air pressure, or “vacuum effect,” helps limit the spread of air-based contaminants into surrounding areas.

Recirculation operation mode

If negative pressure is not required, such as in an open-air, temporary hospital, the machine can be used as an air “scrubber,” pulling air in, removing many contaminants, and discharging cleaner air back into the room. In the event of rooms with difficulties in obtaining satisfactory ventilation or to support existing ventilation, placing the equipment in the area to be treated mitigates the contaminant load. They must maintain a significant hourly air movement rate to support the RETENTION and INACTIVATION strategy.



M5 PREFILTER

The M5 prefilter is installed as machine protection, extending the working life of the HEPA filters and improving the efficiency of the UV lamps.



M5 Prefilter

HEPA FILTERS: HIGH EFFICIENCY FILTRATION

Those filters have high filtration efficiency and are tested under Standard EN-1822 with MPPS (particle size more difficult to filter or particle size with the least total filtration efficiency). Viruses are normally transmitted through integration into two types of droplets or bioaerosols of human origin (sneezing, coughing, speech, breathing, etc.): “droplet” (droplets > 5 microns) and “droplet nuclei” (< 5 microns). The smaller the size, the longer they stay in the atmosphere. HEPA filters actively participate in the bioaerosol RETENTION strategy, mitigating the droplet transmission mechanism. Large filtering area cell filters (depth 296 mm) have a much higher particle retention capacity than low-depth filters, significantly reducing their maintenance requirements and improving their amortisation. H13 HEPA filters efficiency is 99.95% regarding MPPS. H14 HEPA filters efficiency is 99.995% regarding MPPS.



HEPA filters

ACTIVATED CHARCOAL FILTRATION

As an air purifying complement, carbon filters with chemical adsorbent are able to eliminate odours by adsorbing gases such as hydrogen sulphide, dimethyl sulphide, mercaptans, nitrogen oxides, formaldehydes, VOCs, formol, ethylene, chlorine, ammonia, mercury, etc.



Charcoal filter

ULTRAVIOLET LAMPS

UV lamps are involved in the strategy of air cleaning, reducing the concentration pathogenic pollutants. UVC radiation inactivates and inhibits the replication of the nucleic acids (DNA and RNA) in micro-organisms (viruses, bacteria, etc.). Absorption of very high energy over a wavelength of 253 nm results in irreversible damage to the structure of nucleic acids and proteins at a molecular level (Ashrae Fundamentals, Ch. 62, Ultraviolet and surface treatment).

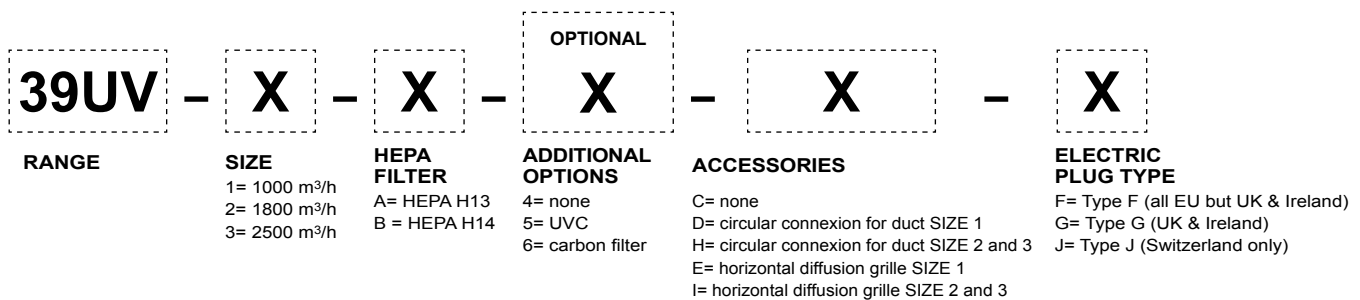
Technical features of the UV lamps option in Opticlean

Model	Number of lamps	Power consumption in Watts	Total power consumption	Amperes (A)	Voltage(V)	Maximum intensity (A)
OptiClean™ 39UV 10	2	60	120	0,66	230	1,1
OptiClean™ 39UV 18	4	60	240	1,32	230	2,2
OptiClean™ 39UV 25	4	60	240	1,32	230	2,2

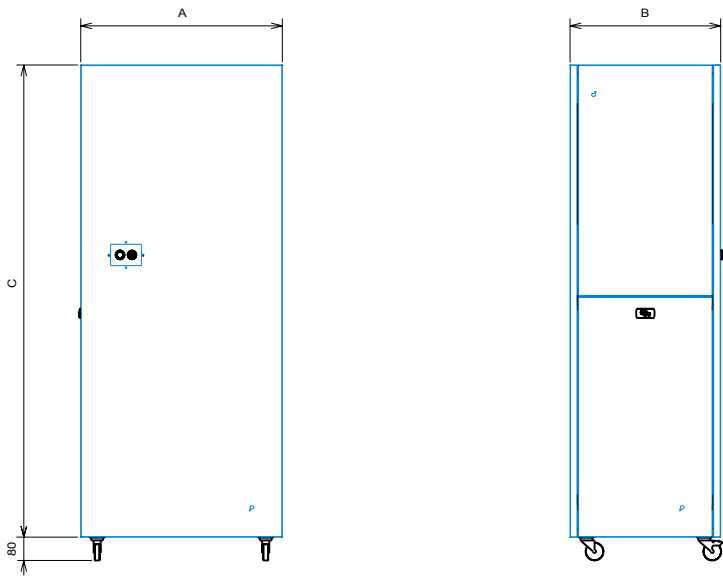
AVAILABLE FEATURES

FEATURES	BASIC	OPTIONS
Casing coated RAL 9010 (White)	X	
Prefilter M5	X	
Absolute Filter H13	X	
Absolute Filter H14		X
EC Motor fan	X	
Vertical Air diffusion grill	X	
Circular connexion for Duct (dimensions depending on size)		X
Additional plenum with horizontal diffusion grille		X
Start and Stop Switch	X	
Electrical connexion - 230V 1Ph 50 hz	X	
Power cable 2,5 m	X	
Filter clogging indicator	X	
Adjustment potentiometer air flow	X	
Caster (wheels) 360 ° (2 lockable)	X	
Solution 1 Additionnal UV lamps device		X
Solution 2 Additional Carbon Filter		X

MODEL NUMBER NOMENCLATURE



DIMENSIONS AND TECHNICAL DATA



Dimensions (mm)	A	B	C
OptiClean™ 39UV 10	675	505	1580
OptiClean™ 39UV 18	675	810	1710
OptiClean™ 39UV 25	675	810	1710

Noise level acoustic spectrums (Lw = noise power level)

■ OptiClean™ 39UV 10

Proportional potentiometer signal	RPM	Airflow (m³/h)	W	125	250	500	1000	2000	4000	Lw
2,5 V	768	240	8	38,5	32,9	26,9	35,2	10,2	9,2	39,9
5 V	1448	520	36	52,1	45,5	40,7	37,6	34,0	24,1	49,3
7,5 V	2138	840	106	57,8	60,1	50,4	45,5	44,9	37,4	58,1
10 V	2498	1000	169	61,3	59,8	52,8	49,5	48,7	42,2	62,1

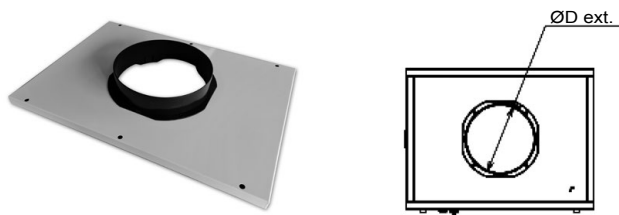
■ OptiClean™ 39UV 18

Proportional potentiometer signal	RPM	Airflow (m³/h)	W	125	250	500	1000	2000	4000	Lw
2,5V	813	490	24	53,4	43,3	33,9	28,3	22,6	15,1	39,6
5V	1653	1170	95	70,9	64,2	54,6	49,5	43,2	38,3	60,4
7,5V	2526	1920	274	67,3	76,5	66,7	61,3	55,9	51,4	70,3
10V	3219	2500	535	72,9	81,3	73,4	67,8	62,7	58,7	76,9

■ OptiClean™ 39UV 25

Proportional potentiometer signal	rpm	Airflow (m³/h)	W	125	250	500	1000	2000	4000	Lw
2,5V	573	600	29	54,6	40,6	34,9	29,0	21,2	15,4	40,3
5V	1144	1550	139	72,0	60,6	53,5	47,3	39,6	35,1	58,3
7,5V	1702	2560	420	76,8	73,6	65,1	58,9	51,9	47,2	68,4
10V	2049	3110	741	73,7	80,1	69,8	64,4	57,8	53,0	72,6

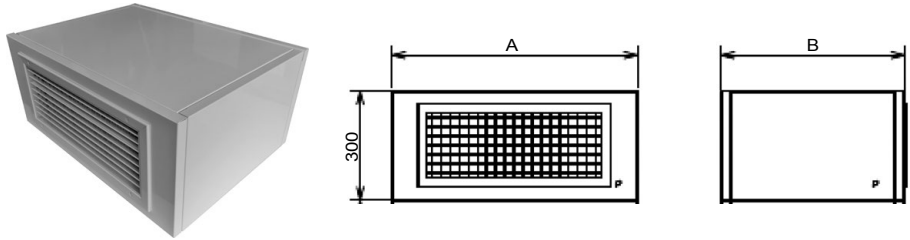
Duct connections for negative pressure



Airflow	D
2500 m³/h	355
1800 m³/h	355
1000 m³/h	250

DIMENSIONS AND TECHNICAL DATA

Additional Acoustic Horizontal Diffusor *



Airflow	A	B	C
2500 m ³ /h	675	810	1710
1800 m ³ /h	675	810	1710
1000 m ³ /h	675	505	1580

* 2 dba noise reduction of sound pressure level (Lp) at 1.5 m

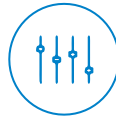
OPTICLEAN™ 39UV AIR SCRUBBER SERIES

At Carrier, we continue to innovate, seeking new solutions that will improve the quality of HVAC and air conditioning installations. Our experts will advise you on your path towards buildings with healthier, safer and more productive environments, through increasingly efficient and environmentally responsible solutions.



PLUG & PLAY DESIGN

The design of the equipment is made to simplify your installation as much as possible, making it easier to use for any application.



100% CONFIGURABLE

The equipment has different filtration HEPA stages and the possibility to include activated char-coal or germicide system (UV) as an option.



QUIET

With low sound levels, this unit is ideal for use in spaces with permanent human occupation.



EASY CLEANING AND MAINTENANCE

Smooth, screwless finishes and easy access to all parts of the unit make the OptiClean™ 39UV easy to clean and maintain.



HIGH ENERGY EFFICIENCY

The high performance EC motor (with electronic switching) reduces power consumption.



GREAT VERSATILITY

The OptiClean™ 39UV can be used in 2 different operating modes including negative air pressure and recirculation.

OTHER INDOOR AIR QUALITY SOLUTIONS

Carrier has developed a comprehensive suite of innovative solutions aimed at ensuring healthier, safer, more efficient and productive indoor environments in key applications, such as commercial offices, healthcare, hospitality, education and retail. From products to improve indoor air quality and remote services to ventilation management of buildings, and comprehensive solutions in public spaces, Carrier is redefining the spaces of the future, today.

- A wide range of AHU's can be customised to each of the solutions, thanks to the wide variety of configurations available to meet the technical requirements of your project.
- Our control solutions optimise air quality at all times, improving comfort and efficiency.
- Carrier offers a wide range of services to monitor your buildings to make them safer and more efficient.





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