

# THE IMPORTANCE OF THE FILTRATION SYSTEM TO CONTROLLING AIR CONTAMINATION



Cleaning is consistently evolving, as we seek to meet higher hygiene standards ever more effectively.

IPC is everyday working hard to find new solutions to the ever-changing challenges that the professional cleaning world is facing. We are able to offer high efficiency filtering media and solutions with this specific aim. Here below you can find more details about HEPA/ULPA filters and LMH class vacuum cleaners.

## WHY CHOOSE A HEPA / ULPA VACUUM CLEANER

**HEPA** (High Efficiency Particulate Air filter) and **ULPA** (Ultra Low Penetration Air filter) filters are classified by the European standard EN 1822. These filters, if designed correctly, are able to **guarantee a sterile air flow**.

**Filtration efficiency is based on particle size counts** so penetration is higher in the range between 0.02 and 0.5 micron (MPPS).

TYPE	CLASSIFICATION	EFFICIENCY	PENETRATION	
EPA	E10	>85%		"SEMI-ABSOLUTE" HIGH EFFICIENCY FILTERS
	E11	>95%		
	E12	>99,5%		
HEPA	H13	>99,95%	≤0,05%	"ABSOLUTE FILTERS" WITH VERY HIGH EFFICIENCY
	H14	>99,995%	≤0,005%	
ULPA	U15	>99,9995%	≤0,0005%	"ABSOLUTE FILTERS" WITH VERY LOW PENETRATION
	U16	>99,99995%	≤0,00005%	
	U17	>99,999995%	≤0,000005%	

## WHY CHOOSE A L/M/H VACUUM CLEANER FOR DANGEROUS DUST

International product standard for professional vacuum cleaners (IEC 60335-2-69 Annex AA) defines all the protections and performances which are required when vacuuming **dangerous substances**. Structure design, filtering, safety and protection systems have been identified by international technical committees in order to restrict the OEL professional exposure to 3 vacuum classes **L (Low risk > 1mg / mc)** - **M (Medium risk > 0.1mg / mc)** - **H (High risk < 0.1mg / mc)** according to the contaminants limit- concentration which can be inhaled with any health risk.

### 60335-2-69 ANNEX AA DEFINES THE 3 LEVELS OF DUST HAZARD:

	L (LOW RISK)	Dust which is considered dangerous for human health if present in the air, in concentration <b>over than 1 mg/mc</b> .	<b>Examples:</b> fine dust with a value lower than the general dust limit of 3 mg/mc, mineral dust containing aluminium hydroxide.
	M (MEDIUM RISK)	Dust considered dangerous for human health if present in the air, in concentration <b>over or equal to 0,1 mg/mc</b> .	<b>Examples:</b> wood dust, paint dust, gypsum (plaster) dust.
	H (HIGH RISK)	Dust considered dangerous for human health if present in the air, in concentration <b>less than 0,1 mg/mc</b> .	<b>Examples:</b> asbestos dust, dust with pah content, zinc chromate dusts, mould.