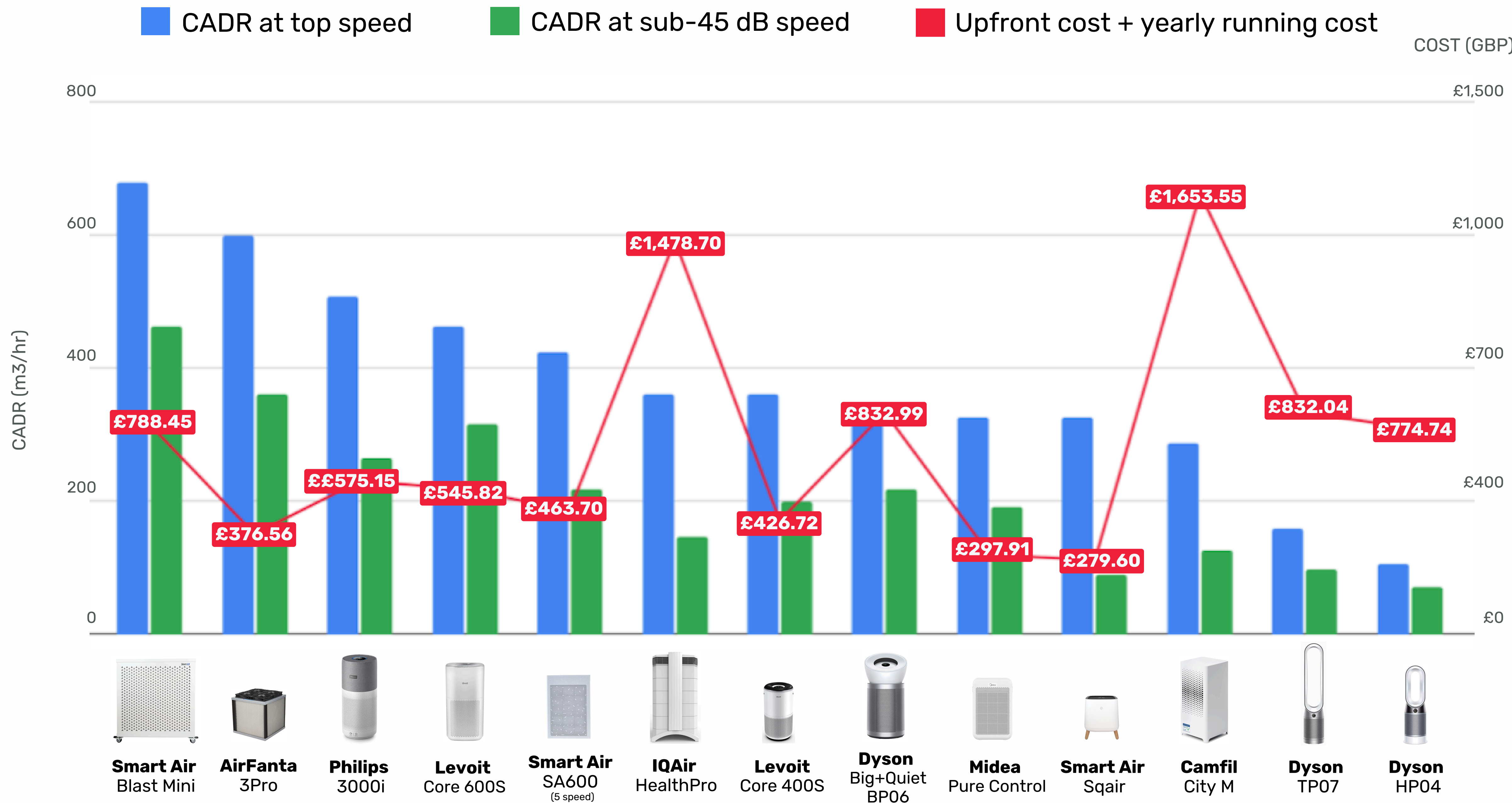




# AIR PURIFIER COMPARISON

Visualising the relationship between clean air delivery rate and cost across 13 different air purifier models readily available in the UK.



List price (£)	£432.00	£150.00	£419.00	£299.99	£222.00	£999.00	£239.99	£699.99	£199.99	£132.00	£1,200.00	£599.99	£549.99
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## AIR FILTER TYPE

Particle filter	H13 HEPA	H11 HEPA	HEPA-like	HEPA-like	H13 HEPA	HyperHEPA	HEPA-like	H13 HEPA	H13 HEPA	H13 HEPA	HEPA	H13 HEPA	H13 HEPA
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## PERFORMANCE INSIGHTS FROM THE TESTS

CADR at full speed	679 m <sup>3</sup> /hr	599 m <sup>3</sup> /hr	508 m <sup>3</sup> /hr	462 m <sup>3</sup> /hr	423 m <sup>3</sup> /hr	362 m <sup>3</sup> /hr	361 m <sup>3</sup> /hr	336 m <sup>3</sup> /hr	326 m <sup>3</sup> /hr	326 m <sup>3</sup> /hr	287 m <sup>3</sup> /hr	159 m <sup>3</sup> /hr	105 m <sup>3</sup> /hr
Sound level at full speed	56.3 dBA	56.3 dBA	59.2 dBA	50.2 dBA	56.7 dBA	61.2 dBA	55.9 dBA	51.4 dBA	50.9 dBA	58.2 dBA	66.9 dBA	54.5 dBA	54.5 dBA
Energy pulled at full speed	122.7 watts	43.2 watts	51.3 watts	49.2 watts	53.8 watts	145.2 watts	25.8 watts	32.9 watts	23.4 watts	39.4 watts	45.3 watts	28.9 watts	25.5 watts
CADR at sub-45dB speed	462 m <sup>3</sup> /hr	361 m <sup>3</sup> /hr	265 m <sup>3</sup> /hr	316 m <sup>3</sup> /hr	217 m <sup>3</sup> /hr	146 m <sup>3</sup> /hr	200 m <sup>3</sup> /hr	217 m <sup>3</sup> /hr	191 m <sup>3</sup> /hr	90 m <sup>3</sup> /hr	126 m <sup>3</sup> /hr	98 m <sup>3</sup> /hr	71 m <sup>3</sup> /hr
Sound level at sub-45dB speed	44.9 dBA	43.3 dBA	37.4 dBA	50.2 dBA	41.5 dBA	40.9 dBA	44.4 dBA	40.4 dBA	40.5 dBA	35.5 dBA	44.9 dBA	44.4 dBA	42.4 dBA
Energy pulled at sub-45dB speed	51.9 watts	8.9 watts	15.5 watts	21.1 watts	12.9 watts	47.3 watts	9.2 watts	10 watts	7.3 watts	5.6 watts	7.9 watts	10.0 watts	10.0 watts

## ROOM SIZE RECOMMENDATION (to achieve six air changes per hour at sub-45dB fan speed)

Maximum room size	77.0 m <sup>3</sup>	60.2 m <sup>3</sup>	44.2 m <sup>3</sup>	52.6 m <sup>3</sup>	36.2 m <sup>3</sup>	24.2 m <sup>3</sup>	33.4 m <sup>3</sup>	36.2 m <sup>3</sup>	31.7 m <sup>3</sup>	15.1 m <sup>3</sup>	20.9 m <sup>3</sup>	16.3 m <sup>3</sup>	12 m <sup>3</sup>
Units needed per classroom	2	3	3	3	4	6	5	4	5	10	7	9	13

## ESTIMATED YEARLY RUNNING COSTS (assuming 24/7 operation at top speed, all year round)

Filter replacement cost	£90 (HEPA only)	£131.66 (HEPA only)	£43.00	£139.98	£124.90	£162.15	£131.98	£60.00	£46.82	£60 (HEPA only)	£98.55	£170.00	£170.00
Energy consumption	£266.45	£94.90	£113.15	£105.85	£116.80	£317.55	£54.75	£73.00	£51.10	£87.60	£355.00	£62.05	£54.75



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“Since 2020, we have tested **96 different air purifiers** following the same process. This is how we gather comparable data on air cleaning performance, sound generation, energy usage, user experience, and long-term running costs.

Based on our data, the **Smart Air Blast Mini** is the air purifier we recommend for classrooms. It offers excellent air cleaning power even when running at its lowest fan speed, which generates **less than 45 dBA** of noise. Its large HEPA filter can last for up to **20 months** (when running for 8 hours per day), which is much longer than the usual 6 months you get with most devices. We estimate an annual cost of **£356.45** when running the Blast Mini at top speed 24/7, all year round—this is cheaper than buying a meal deal, or a coffee and a cake every day for a full year.”

In line with OPSE, we have avoided inclusion of additive air cleaning methods and similar products such as ionisation. We will continue to do so until there is a standardised way to ensure their safety and effectiveness.