

# PuriFLY

Excellent drinking water quality on board

Lufthansa Technik and Aqua free have developed a dual-stage filter concept that is easy to install in all aircraft types. PuriFLY provides 99.99999% germfree water with a capacity 2–3 times higher than conventional filters. This technology is tested according to the international ASTM F838-20 standard for sterilization grade filters and exceeds the highest level of filtration, log-7.

PuriFLY is a sustainable solution for uncompromised and safe drinking water on board. The filter change interval can be reduced by a factor of 2 to 3 compared to conventional filters. A newly designed filter with a dual-stage filtration concept ensures germ-free potable water on board for the entire service life and a lower drop in water pressure. We created an effective and cost-efficient solution by applying medical technology to the aircraft. PuriFLY's longer service life than conventional filters means fewer replacement intervals, less material and lower costs. An upgrade consists only of replacing the filter cartridge and updating the documentation.

A truly alternative solution for all airlines to save costs and be sustainable at the same time.

## Benefits

### Savings and sustainability

Reduced waste and costs by a minimum of 50% due to higher capacity

Used filters can be cleaned and reused (under development)

Lower weight of individual filters

### Comfort and handling

Higher water flow combined with lower pressure drop

Easier handling and time savings for cabin crew

Simpler way to meet country-specific water quality requirements

Straightforward retrofit solution easy to install in all aircraft types

### Health on board

Retains 99.99999% of all microorganisms

Bacterial retention remains stable

No change in saturation levels

Sustainable and medical technology

In cooperation with

**Aqua free**

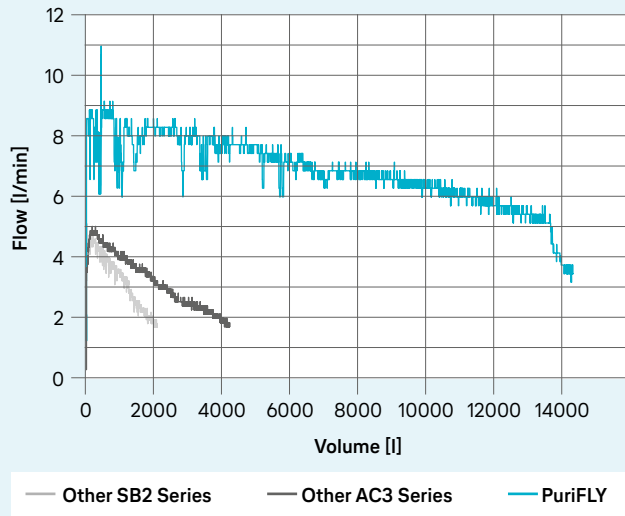


**Lufthansa Technik**

## Flow characteristics

Service flow rate at 25 psi, Min.: 3.4 lpm, Max.: 11 lpm

**Flow Measurement**  
(T 20 °C; p (flow) = 1.7 bar)



**Note:** The water flow volume depends on the particle load of the actual water used. Low particle loads have a positive effect on service life/filter lifetime.

## Trend flow volume

Pressure	Initial flow rate	6,500l (1,430 gal)	8,000l (1,760 gal)	14,000l* (3,080 gal)
1.7 bar (25psi)	9 lpm (1.98 gpm)	7 lpm (1.54 gpm)	6.5 lpm (1.44 gpm)	3.4 lpm (0.75 gpm)

\*Filter replacement is recommended after accumulated flow volume, regardless of service life.

## Details make the difference

At first sight, PuriFLY is quite similar to conventional filters, but the design makes all the difference. We have created a hollow fiber membrane with extremely small pores that retain anything larger than 0.2 microns. The result: no germs or bacteria can pass through.

## Contact

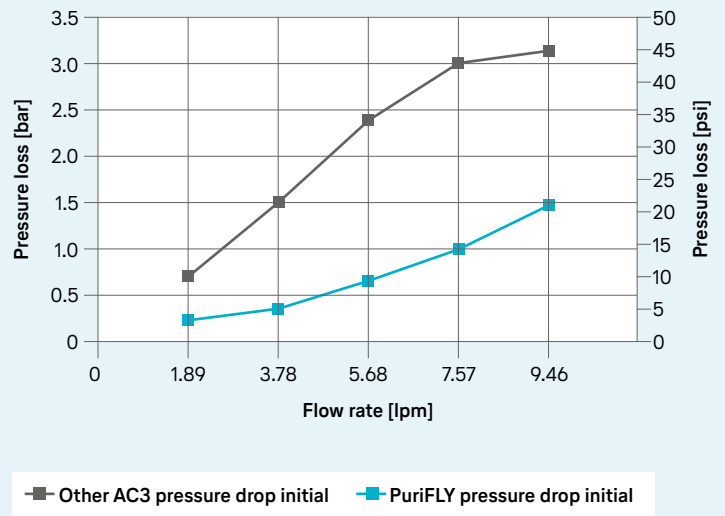
Lufthansa Technik AG  
Weg beim Jaeger 193 | 22335 Hamburg | Germany  
marketing@lht.dlh.de

lufthansa-technik.com

## Initial pressure drop comparison

At flow rate 5.68 lpm (1.5 gpm), pressure drops by 0.648 bar (9.39 psi) when using PuriFLY, while pressure drops 2.397 bar (34.76 psi) when another AC3 filter is installed.

**Pressure Drop Characteristics**



## Chlorine reduction

	Other SB2 Series	Other AC3 Series	PuriFLY
Chlorine reduction tested in accordance to NSF42	~ 52%	~ 63%	~ 96%

## Pure quality

Another advantage compared to conventional filters is the longer life of PuriFLY. Once the activated carbon of other filters starts to saturate, the surface structure becomes a breeding ground for germs, turning the filter into a bacteria multiplier. PuriFLY's new hollow fiber membrane prevents water quality from being compromised. The filter guarantees the highest purification standards and provides sterile filtered drinking water throughout its lifetime. Laboratory tests have shown that PuriFLY's service life is three times longer than previous filters.

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