

7. Maintenance and operational limits

The technical textiles from Euro Air fulfil several functions at the same time. They assure draught free air delivery while giving uniform air distribution in the whole room. Further to this the fabric also acts as an efficient air filter.

The level of filtration offered means a regular maintenance of the textile outlets is required. The maintenance should be carried out in accordance to the type of material used (at the cycle dictated by the degree of contamination present in the inlet air, i.e. indirectly the quality of the inlet air filters and the outdoor air quality) .

To assure maximum lifespan for textile outlets, the following guidelines should be followed:

- EURO AIR systems are designed for installation inside the room, either under or onto the ceiling or on the wall. The outlets are not intended for floor mounting, at least not without the use of a protective cover. The outlets are not to be used for exhaust air.
- EURO AIR systems must be mounted in such a manner that collisions with other structures are avoided (failure to oblige to this can mean localized friction, which in time can cause the textile to tear.
- EURO AIR systems should not be exposed to powerful sources of UV-light.

- EURO AIR suggests the following maximum diameters for single row suspended round outlets:

If wire suspended:
 $\text{Ø}_{\text{max}} < \text{Ø}630\text{mm}$

If rail suspended, outlet with **Gliders**
 $\text{Ø}_{\text{max}} < \text{Ø}1000\text{mm}$

If rail suspended, outlet with **Fasttrack**
 $\text{Ø}_{\text{max}} < \text{Ø}1800\text{mm}$

Outlets larger than mentioned above should always be mounted using 2 rows of suspension.

- EURO AIR recommends that the pre-filtration should be to filter class EU7 or better.
- EURO AIR systems are not to be exposed to a continuous cycle temperature exceeding 70 °C
- EURO AIR systems are not to be exposed to naked flame.

Maintenance cycle – expected duty between washing

When determining the expected duty for a textile outlet, there are several factors that needs to be taken into account. The following set of guidelines allows you give a good estimate of the expected duty.

7.1: Maintenance and operational limits

k_1 = chosen type of fabric:

Type 1 = 0,55, type 2 = 0,65, type 3 = 0,72,
type 4 = 0,79, type 5 = 0,86, type 6 = 0,95, type 7 = 1

k_2 = outdoor air pollution:

Industrial area = ,7, habitation/industry mixed = 0,8,
habitation and forest district = 0,95

k_3 = Recirculation %:

0% = 0,85, 25% = 0,88 50% = 0,92,
80% = 0,94, 100% = 1,0

k_4 = hygienic demands:

special high demands = 0,65, high demands = 0,8
normal demands = 1

k_5 = working shifts:

triple shift = 0,80, double shift = 0,90,
one shift = 1,0

k_6 = pre-filtration:

< EU 4 = 0,65, EU 4 = 0,8, EU 5 = 0,85, EU6 = 0,90,
EU 7 = 0,95, > EU 7 = 1

Maintenance cycle: D (Days)

$$D = k_1 \times k_2 \times k_3 \times k_4 \times k_5 \times k_6 \times 600$$

7.2 Cleaning instructions

Cleaning of polyester and trevira

- Wash 2-4 times at max 40° C with washing powder in accordance to instructions by manufacturer.
- If outlets are heavily soiled, they should be rinsed between washes.
- If the outlets are to be disinfected, add min. 200 mg/L active chlorine to the final rinse water (N.B.

colored outlets can fade when disinfected)

- Rinse outlets in clean cold water.
- Do not tumble dry!

Socks can be spin dried, the exception being outlets with internal rings. Here the rings must be removed prior to drying.

Washing of clean room materials

Washing of clean room materials is not recommended under normal circumstances, but is possible following the procedures given for Polyester and Trevira CS material. If the fabric turns slightly grey during operation, the pre-filtration should be examined and possibly exchanged for a filter better suited. During the washing procedure, particles can be picked up by the fabric and later blown into the room. If the clean room socks are being washed there is no further guarantee for the function of the socks from Euro Air, with regards to particle count.

Chemical cleaning of polyester and Trevira CS

Chemical cleaning of outlets should only be attempted in cases where the outlets are slightly dirty.

To achieve some degree of disinfection, it is recommended to use chemical cleaning with perchlorethylen.

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Cleaning of Inject outlets

EURO AIR Inject outlets do not require cleaning from a flow technical point of view, however aesthetics or hygiene conditions may necessitate the cleaning of the outlets.

EURO AIR Inject systems can be cleaned manually on the outside and on the inside. For this purpose a thin water/soap dilution and a brush or a sponge should be used (standard grade washing detergent can be used).

After the cleaning the Inject Socks should be rinsed with clean water.

If the Inject Sock is very dirty the inside of the sock should be turned out and swept or vacuumed.

Use of Hydro carbon based solvents can cause damage.

Under no circumstances use solvents containing chlorate, this will deteriorate the PVC coating, causing the material to turn brittle, eventually cracking can occur!

Cleaning of M0 Outlets (Glass fibre weave)

These outlets can only be cleaned by means of a damp cloth. A standard commercial grade detergent can be used in a watery solution for this purpose. Outlets must allowed to drip dry. **DO NOT MACHINE WASH!**