PERSONAL ENCLOSURE

Personal enclosure is defined as providing a worker with a personal enclosure within a work environment, e.g. air-conditioned cabin. The concept of personal enclosure is similar to that of segregation, except that for personal enclosure not the source but the worker is placed in an enclosure within a work environment. The personal enclosure could be partial or complete / with or without ventilation. The personal enclosure of the source is foreseen during the conception of a workshop.

RMM SPECIFICATION

/

Effectiveness

Mean: 75%

60% — 98%

Implementation

- ☐ Ready to use
- ☑ Development required
- ☑ Without any maintenance
- ☑ With regular maintenance

Cost

Without ventilation: €€

With ventilation: €€€

Target group

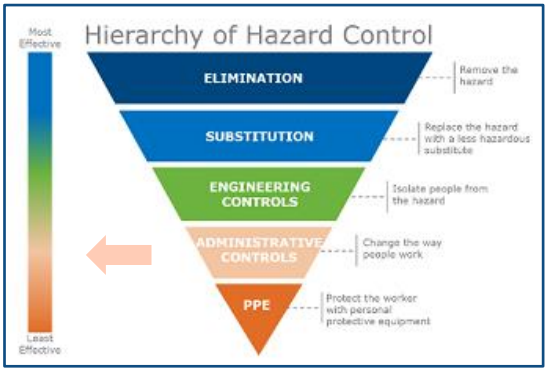
- ☑ Workers
- ☐ Consumer
- ☐ Environment

Lifetime

Process lifetime

ADVICES TO ENSURE THE MAXIMUM EFFECTIVENESS

A worker can be separated from several emission sources, and therefore the reduction in exposure due to personal enclosure can apply to multiple exposure sources. A personal enclosure (separation of the worker) can only apply if only a FF source exists, because of the dimensions of the personal enclosure and the consequent distance between the source and the breathing zone of the worker. Two critical components for an effective enclosed cabin system (or other personal enclosures) are a **properly designed, installed and maintained filtration** and **pressurization system**, along with a **method for maintaining structural cabin integrity**. For a completely separated cabin, **an extract ventilation system** can contribute to lower exposure levels especially when the incoming air is filtered, but in case of a partial personal enclosure the extract ventilation can actually draw contaminated air into the cabin. Therefore, a major component in an effective system is to ensure that the enclosed cabin is **positively air pressured**, thereby preventing contaminated air from entering the personal enclosure.



To know more

- Development of a mechanistic model for the Advanced REACH Tool (ART)

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