



Co-Mingling

Appendix II

Technical specifications

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Document scope

1. This document describes the technical specifications applicable to the VOO S.A. Co-Mingling Service. Throughout the document, reference is made to national and international standards or specifications. A list of the standards and specifications and the applicable versions referring to, are included in Appendix A at the end of this document.

1. Terminology

2. The terminology used throughout this document is explained in the glossary of the service-related Reference Offer.

2. Configurations

2.1 Co-Mingling - Figure

3. The Beneficiary will install the equipment that is allowed to process the VOO S.A. services at VOO S.A.'s premises. The Hand-over Point is located in VOO S.A.'s premises.

3. Co-Mingling environmental conditions

3.1 Environmental conditions and safety requirements

3.1.1 General concept

4. The following requirements and guidelines are necessary for the protection of the VOO S.A. and Beneficiary staff members, third party employees, the installations of all parties involved and the protection of the environment as a whole.
5. The requirements listed in this document are based on the legal requirements stated on a regional, Belgian or European level with common safety, health and environmental practises as already applicable on VOO S.A. sites.
6. The installed equipment should always comply with the European Directives and the international standards that are applicable. Furthermore, the Belgian legislation and standards will be the preference legislation to adhere to. If not possible, the international standard must apply.
7. We especially refer to the ARAB/RGPT and the Codex of Welfare (Belgian Occupational Safety & Health regulations); the Royal Decree within this field of application. The AREI/RGIE with regard to electrical safety and the Brussels regional environmental legislation (Appendix B: Environmental permits).
8. The applicable NBN standards can be obtained at the Belgian Standards Institute.

8.1.1 Use of special materials

9. The use of chemical substances will be in full compliance with the Belgian safety regulations and the applicable regional environmental legislation with regard to storage and waste removal. The prescriptions and guidelines such as labelling, as mentioned on the Material Service Data Sheets (MSDS) must be completely adhered to.
10. The use of radioactive materials is prohibited except if technically, no other application can be found.
11. Some VOO S.A. buildings could contain asbestos as a construction material. In case of construction works, the review of the asbestos inventory is required before starting the works as such.

11.1.1 Guidelines for employees of Beneficiary's & third parties inside VOO S.A. buildings

12. Accidents and technical incidents must be immediately reported to the corresponding supervisory personnel and the relevant safety department at VOO S.A. at the following telephone number: 071967171
13. Fire prevention: safety and fire-fighting equipment, exits, passageways and fire doors can not be closed off or obstructed. Everything has to be done to avoid fire, e.g. clean up the Co-Mingling room to keep it clear of dust, of waste...

14. Smoking ban: non-smoking areas must be fully complied with.
15. Fire permits: See the required reporting procedure for work (Appendix C). All feasible measures have to be taken to avoid the start of the spread of a fire. Fire extinguishers have to be ready for use near every work that has a "heat point" reaction (welding, cutting and burning of metal; opening of gas and fuel pipelines; disconnecting fire safety or fire detection equipment). All flammable materials have to be evacuated or covered with flame retardant material.
16. Electricity: it is forbidden to work on any appliances, equipment and machines which have not been disconnected from their source of power, except for qualified staff members and under explicit consent of VOO S.A. or the owner of the equipment
17. Individual means of protection: the prescribed equipment must be worn in those places and/or for those activities in which it is required.
18. Equipment: tools that are property of VOO S.A. may only be used with the explicit permission of the VOO S.A. work supervisor.
19. Environment & Waste: the regulations with regards to environmental preservation and nuisance have to be followed. Waste has to be immediately and following the environmental guidelines removed from the room or area by the third party employee.

19.1.1 Guidelines for Beneficiary equipment & installation procedures at VOO S.A. premises.

3.1.5.1 Fire safety

20. The structures and materials chosen shall be fire retarding or non-combustible.

3.1.5.3 Conductors and accessories

21. The conductors and accessories shall be resistant to the mechanical, electrical, chemical and thermal conditions which may occur during use.

3.1.5.4 Noise production

22. Structures, machines and equipment shall not exceed the noise level of 65dB (A) in the frequency range from 20 Hz to 20 kHz as an independent unit.

3.1.5.5 Storage batteries

23. Conform the current legislation everything shall be done to avoid leakage of batteries. Therefore the Beneficiary shall install gas recombination batteries. Retention cans shall be placed under the batteries to avoid eventual ground or soil contamination. Storage batteries having sealed cells shall be fitted with flame-retaining ventilation caps and all the best and available techniques shall be used to avoid the chance of an explosion in the case of gas production. The equipment of the batteries and their loading stations shall comply with all legally required specifications.

3.1.5.6 HVAC

24. The beneficiary is not allowed to install HVAC solution without the consent of VOO S.A..

3.1.5.7 Mechanical safety

25. Constructions of any type whatsoever shall be designed in such a way that they present no danger of injury to the user and staff.

3.1.5.8 Protection against electromagnetic fields

26. The equipment must be designed so that it does not cause any perturbation on VOO S.A. equipments.
27. The equipment must be designed so that personnel do not have to wear any personal means of protection.

3.1.5.9 Radio equipment

28. This shall comply with NEN 3548 [21] (IEC 215), the above-mentioned safety requirements and the requirements imposed in chapter 13 with respect to electromagnetic safety.

3.1.5.10 Optical safety Laser

29. If laser equipment will be used, this shall comply with:
 - a. Conform telecom standard specifications
 - b. It's forbidden to use class 4 lasers for telecommunication equipment
 - c. A protection cap conform the class of the laser, which prevents every emission above the allowed thresholds when the equipment is not in use.
 - d. Optics and visualisation screens to avoid the exposition dangers for normal use, especially for controls with microscope and glasses.
 - e. Labelling conform the class of the laser
 - f. Identification of the equipment, type, power, wavelength and wave period
 - g. Indication and labelling of all emission openings.
 - h. All prevention measures shall be taken into account for the protection of the high-tension part of the equipment.

3.2 Environmental specifications (utility infrastructure + access specifications)

32. The environmental conditions should comply with those specified by class 3.1. of the ETSI document ETS 300 019-1-3.
33. VOO S.A. will provide a full utility infrastructure as needed for normal transmission rooms.
34. This includes:
 - a. Cooling (if required);
 - b. Fire detection (if also installed for VOO S.A.);
 - c. Heating (if required);
 - d. Lighting;

35. The Beneficiary can have access to the Beneficiary's Co-Mingling Area at any time 24 hours a day, 7 days a week by means of Security Escort Service. The Beneficiary cannot enter a VOO S.A. building without Security Escort.
36. The dimensions of the Beneficiary's Co-mingling Area: case by case taken into account the building/room.
37. The minimum space for a Co-mingling Area is a standard footprint of xx cm X xxv cm (one rack) with xx cm in front and x cm at the back.
38. The maximum height of the rack is xx m.
39. The maximum space for Co-mingling is a multiple of standard footprints, which will be x cm X x cm (xx racks) with XX cm in front and XX cm at the back. The maximum height of the racks is XX m.
40. Maximum floor load per rack is x kN/m²: case by case taken into account the building/room

4. Power & HVAC supply

43. Reference is made to Annex I5.

5. Co-Mingling specifics

44. Concerning the installation of the Beneficiary's equipment within the VOO S.A. buildings following specifications have to be applied:

- VOO S.A. has the free choice to determine the most appropriate place for Co-Mingling Area's within its technical Building. The Beneficiary's Co-Mingling Area can be located inside a "Co-Mingling Zone" which is shared by a number of Beneficiaries; but can also be located anywhere near VOO S.A. equipment if VOO S.A. considers this place a the most appropriate.
- The Beneficiary's equipment is installed in a secured rack to which only the Beneficiary has access, thus the racks must be equipped with doors that can be locked (key control on rack).
- All Beneficiaries' equipment has to be installed by the Beneficiary itself or by its authorised staff working under the Beneficiary's responsibility inside the Beneficiary's Co-Mingling Area.
- The Beneficiary's equipment may be connected with the equipment of one or more Beneficiaries for the provision of transport services for VOO S.A. services.
- The Beneficiary's equipment is cooled by natural convection.
- The Beneficiary is allowed to install the required equipment in its Co-Mingling Area as far as it complies with all applicable specifications concerning electrical safety and electromagnetic conformity; a conformity certificate may be asked for; and as far as the equipment is indispensable to supply the planned VOO S.A. services. This means transmission equipment, but also other types of equipment (router, switch, test, multiplexer...) can be accepted as an integrated entity.

45. The Beneficiary must comply with the same environmental, safety and electromagnetic compatibility specifications than VOO S.A..

6. Appendix B: Environnemental permit

46. To be compliant with the current regional environmental legislations the Beneficiary is obliged to have an environmental permit before the Beneficiary can exploit her installations (e.g. batteries, battery loading installations...). The Beneficiary has to inform VOO S.A. and has to give VOO S.A. all the necessary information so VOO S.A. can inform the authorities regarding the equipment of the Beneficiary. For new installations which are not yet on the existing permit because VOO S.A. doesn't exploit them or for VOO S.A. installations for which the capacity (or power) is below the legally threshold, the Beneficiary is obliged to demand a new permit for these new installations. If the Beneficiary exceeds the legally thresholds the Beneficiary has to wait to exploit until the permit will be delivered by the competent authorities. If the Beneficiary wants to increase the capacity or power of some installations, and this is less than 50% of the power or the capacity of the installation on the basic permit, then the Beneficiary has to do a modification of the environmental permit. The Beneficiary is also obliged to inform VOO S.A. if the Beneficiary decreases the capacity or power of the installations. Also every other important change of the installations that could have a serious impact on some environmental aspects have to be declared to VOO S.A..
47. If the Beneficiary wants to install batteries, battery loading stations, extra HVAC installations or other environmental permit required installations, the Beneficiary has to give VOO S.A. all the necessary information so VOO S.A. can introduce a new environmental permit demand or an extension on the existing environmental permit to the competent authorities. When the information is admissible VOO S.A. will set up a dossier and will transmit the permit or extension demand to the respective authorities.
48. The Beneficiary has to respect the different delays of the environmental permit procedures. If the Beneficiary wants an extension (taking into account the 50% rule) on an existing permit the Beneficiary can install her installations the day after VOO S.A. has sent the extension demand to the authorities. If a new permit is needed, the Beneficiary has to respect the delays like specified in the environmental legislations. Installation of the equipment only allowed after getting the permit.
49. Every time the Beneficiary wants to increase or decrease the power or capacity of its equipment, the Beneficiary will inform VOO S.A. and will give all the necessary information.
50. Below an example of the necessary information which VOO S.A. needs to be able to ask a new permit or extension of the existing permit.
 - Batteries & battery loading stations:
 - Type of the batteries (kind of batteries, Gel, AGM ...)
 - The precautionary measures that has been taken to avoid leakage, explosion danger...
 - The power of the batteries: power per unit batteries (VAh) x amount of units
e.g. 48V x 200 Ah x 1 unit = 9600 VAh
 - The power of the battery loading stations: power per unit x amount of units
e.g. 5 kW x 1 unit = 5kW
 - HVAC installations:
 - Power of the cooling installations:
 - Electrical power of the cooling installations (the electrical power of every piece of the installation has to be mentioned)
51. The Beneficiary will respect all the sectorial and specific environmental conditions in the three Regions, which are specified in the current legislations or in the permit itself.
52. The Beneficiary will give access to the environmental inspection (of the different Regional authorities) to all their locals and installations.

7. Appendix C: Required reporting procedure for work

But	Rassembler en un point central l'information concernant des travaux qu'on effectue dans le patrimoine de VOO S.A.
Qui	Toute personne effectuant un des travaux repris ci-dessous (membre du personnel VOO S.A. ou contractant)
Nature des travaux	Travaux architecturaux ou travaux pour lesquels un permis de feu est obligatoire : travaux de jointage - travaux avec flamme ouverte - Meulage - découpage au chalumeau - brasage/soudage - brûlage de peinture, papier peint, etc - travail avec point chaud à proximité de locaux de serveurs ou d'infrastructure télécoms - coupure d'installations de protection contre l'incendie ou de détection d'incendie - utilisation de réchauds à gaz – ouverture de canalisations de gaz et de mazout, ...
Point de contact	071967171 (FR)
Quand avertir	Chaque jour : avant le commencement et à la fin des travaux

Nature de l' information	Avant d'effectuer des travaux	Bâtiment (localisation exacte)
		Nom (+ nom de la firme ou n° du collaborateur VOO S.A.)
		Nature + durée approximative des travaux
		N° de contact (GSM)
	A la fin des travaux	Bâtiment (localisation exacte)
		Nom (+ nom de la firme ou n° du collaborateur VOO S.A.)