



Written with contributions of [Milan ASL Preventive Medicine Department](#)

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FOREWORD

In accordance with the “Special Regulations Nos. 4, 5 and 7”, the “Design, Construction, Set-up and Dismantling Guide”, and the “Food and Beverage Guide” which is under preparation, [this document provides design guidelines for catering services and commercial activities involving food and beverage sales and service.](#)

Participants shall observe the following guidelines, which regulate the design of spaces used for the preparation, service, sales and consumption of food and beverages.

The guidelines present parameters for structures, sanitary facilities and the minimum required equipment to be provided in the design and furnishing of these spaces. These parameters and requisites apply both to users (visitors) and to personnel.

Specific needs will be addressed on a case-by-case basis in response to Participants requests.

Reference to the relevant legislation for each item is provided in this document. The most important Italian national and local legislation is listed below for the sake of completeness:



- [DECRETO MINISTERIALE n. 37 del 22 gennaio 2008 \(DM 37/2008\)](#) regulations regarding the installation of systems in buildings.
- [DECRETO LEGISLATIVO n.81 del 9 aprile 2008, \(D.Lgs. 81/2008\)](#) regarding workplace health and safety.
- [REGOLAMENTO EUROPEO \(CE\) N. 852/2004 del 29 aprile 2004](#) regarding food product hygiene.
- [REGOLAMENTO LOCALE D'IGIENE \(R.L.I.\)](#) of the City of Milan (in particular Titles III and IV) approved by Consiglio Comunale n. 172/84 del 9 maggio 1994 - Atti N. 133296.400 PG. 94, including subsequent amendments and additions.
- [Italian standard UNI 10339](#) “Aeraulic systems well-being/comfort/welfare”
- [REGOLAMENTO EDILIZIO \(R.E.\)](#) of the City of Milan approved by City Council decision no. 81 of 20 July 1999.

RESTAURANTS, SNACK BARS

Places where food and dishes are prepared, heated and served (e.g., self-service cafeteria, full service restaurant, buffet, counter service, etc.).

REQUISITES

Kitchen/Food-Prep Room

- **Average height** of no less than 2.70 metres, minimum height of 2.10 metres. Minimum area of 8 sqm (R.L.I. Art. 4.5.6) and in any case appropriate to the type of activity performed therein and the planned number of food & beverage service staff;
- **Minimum volume** of 24 cubic metres (R.L.I. Art. 4.5.6);
- Natural, direct **ventilation** and **lighting** (from windows on the external perimeter walls) equal to 10% of the surface area of the facility (C.E. Arts. 42 and 44);
- **Cooking equipment**: all cooking equipment using any type of fuel requires a fume extractor hood connected to exhaust flues used exclusively by the cooking facility and extending one metre above the top of the roof (R.L.I. Arts. 3.4.27.2 and 3.4.28);
- **Solid fuel combustion systems**: these systems require certification per D.M. 37/2008 and associated specific regulations. The installer must be properly certified. The room must be outfitted with one or more appropriately dimensioned permanent ventilation ducts protected by grills.
- **The pertinent standard for Aeraulic Systems (Air-Handling Systems) designed to ensure environmental wellbeing is UNI 10339.**
 - The UNI 10339 standard provides guidelines for the definition and classification of minimum requisites and functional parameters for air-handling systems.
 - The UNI 10339 standard applies to air-handling systems installed in enclosed environments to ensure the environmental comfort of the occupants. The air-handling system must achieve and maintain the following performance parameters: conditions of air quality, movement, temperature and humidity specific to the assigned functions (filtration, heating, cooling, humidifying, dehumidifying) in accordance with the UNI 10339 standard.





- **Characteristics and minimum equipment:** (R.L.I. Art. 4.5.6, Annex II, Chapter 1 and 2, EC Regulation 852/2004);
 - the kitchen/food-prep room must not communicate directly with toilet facilities and in no cases may people or animals occupy the room for non-authorized reasons (R.I. Art. 4.2.2);
 - the walls must be plastered or panelled to a minimum height of 2 m with smooth materials that can be washed and sanitized;
 - ceilings and equipment that are not easily accessible because of the height or position must be made/designed so as to prevent the accumulation of dirt, the growth of moulds, and falling particulate matter;
 - flooring must be made in anti-slip materials that can easily be washed and sanitized;
 - doors must be smooth and impermeable;
 - windows must be outfitted with insect/mosquito netting;
 - surfaces and equipment that come into contact with foods must be appropriate for that purpose and easily cleaned and sanitized. They must be made using smooth, washable, non-toxic, corrosion-resistant materials;
 - sinks for foods must be present in sufficient number for kitchen operations, with touchless (no hands or elbows) hot and cold water faucets, liquid soap dispensers and disposable towel dispensers;
 - cupboards for crockery;
 - there must be a sufficient number of properly positioned and marked hand basins for hand washing with hot and cold running water, non-reusable soap and hygienic hand drying

Activated aeration, exhaust and ventilation

Odours, vapours or fumes produced by cooking equipment must be captured and evacuated by means of appropriate extractor hoods connected to exhaust flues (R.I. Art. 3.4.21).

Other technical solutions (self-filtering, etc.) that do not provide with external evacuation of these odours, vapours or fumes are prohibited (R.I. Chapter 4).

“Exhaust flues are defined as those used to evacuate odours, vapours or other airborne substances from enclosed rooms. In order to prevent possible improper use, a special marking (E) must be placed at the inlet to the flue”.

The flue must have exhaust points on the roof as follows:

- On a peaked roof, the exhaust point must be placed 1 m beyond the roof peak in compliance with legislation in force (R.I. Art. 3.4.28):
- On terraces and/or accessible roofs where people may be present, the flue outlet must be placed more than 3 metres above the walking surface.

It is possible (via special authorization) to place the exhaust points on the façade, but in this case they must be outfitted with particulate and odour

abatement systems.

Wood-burning ovens

As expressed in Article 33.1 of Special Regulations no. 4, *“Flammable materials may only be used with the permission of the relevant authority or with special permission from the Organizer, and in compliance with the Laws and Regulations.”*

If wood-burning ovens are planned, a special authorization must be obtained from the Organizer and the exhaust point must be located on the roof. It is forbidden to install exhaust points with particulate and odour abatement on the façade for wood-burning ovens.

Toilet facilities

The following are required:

- at least one annexed washroom for staff use only; or more according to the number of employees.
- public toilet facilities for visitors in sufficient number per R.L.I. Art. 4.5.6.: *“the following must be provided in restaurants, trattorie, snack bars, company canteens, school lunchrooms, prep rooms for preparing pastry or ice cream in cafés or ice cream shops, and ice cream shops and similar facilities:*
 - *At least one public toilet must be provided for each serving room measuring up to 60 sqm; additional public toilets shall be provided in keeping with the rule of at least one public toilet for each 60 sqm of serving room or fraction thereof.*
 - *If more than one public toilet is provided, they must be divided by gender; at least 1 toilet must meet the requirements of DPR 384/78 about barrier-free access”.*

With the exception of handicap-access public toilets (addressed by specific standards and regulations), all toilet facilities shall have the following characteristics:

- toilet chamber, containing a toilet, with minimum area of 1 sqm, average height no less than 2.40 m, and minimum height no less than 2.10 m; provided with a window for direct natural ventilation equal to 10% of the floor area or a minimum of 0.50 sqm, whichever is greater. If no window is provided, the toilet chamber must be equipped with forced air ventilation per R.E. Art. 48.2. Toilet antechamber with minimum area of 1 sqm and minimum height no less than 2.10 m (R.I. Art. 3.11.5; R.E. Art. 34). The door to the antechamber must open outwards and be equipped with an automatic door closure mechanism (R.I. Art. 4.2.10);
- the floor and walls shall be finished up to a height of 2 m in impermeable material that can easily be washed and sanitized (R.I. Art 4.2.10);
- toilet paper must be placed in protective dispensers that prevent soiling (R.I. Art 4.2.10);

- the facility must have a sink with soap dispenser and hot-air hand dryers or disposable towels (DPR 327/80 Art. 28);
- touchless (no hands/elbows) water faucets and toilet flush (R.I. Art. 4.2.10);
- waste container, with pedal-activated sealing lid (R.I. Art. 4.2.10)

Changing rooms

Dedicated toilet facilities and changing rooms are to be provided for food & beverage service staff near their work station and in accordance with the following guidelines:

- appropriate area, no less than 1.50 sqm for each employee per shift with minimum total area of 5.00 sqm (R.I. Art. 3.11.6);
- mean height of no less than 2.40 m and minimum height no less than 2.10 sqm (R.E. Art. 34);
- natural ventilation or else appropriate devices for air exchange per R.C. Art 48.2;
- heating as appropriate (R.I. Art. 3.11.6);
- walls finished up to a height of 2.00 m with impermeable material that is easily washed (R.I. Art 3.11.6);
- toilet antechambers meeting all the above requisites might be used as changing rooms;
- individual, dual-compartment lockers shall be provided to keep work clothes separated from street clothes.

Food storage

The "Goods storage" section in the "Design, Construction, Set-up and Dismantling Guide" states that *"supply storage areas inside the lot must be designed to ensure at least two days of service autonomy"*.

In addition to this rule, the following guidelines must also be followed:

- room of adequate dimensions, with appropriate layout and equipment, separated into raw materials and finished products; shelving and counters must be finished with a material that can be washed and sanitized;
- minimum height no less than 2.10 m (R.E. Art. 34);
- all exterior openings must be protected by means or devices that will prevent the entry of rodents or other pests (mosquito netting) - DPR 327/80 Art. 28;
- flooring must be made of suitable material, the walls and ceilings must be plastered. If the facility contains bulk foods and/or finished and ready for consumption, the walls must be finished to a minimum height of 2.00 m with smooth, washable and sanitizable materials (R.I. Art. 4.2.2).
 - system. Sinks for food washing must be separated from those for hand washing;
 - passageways and circulation paths, when also used for goods handling equipment, must be at least 80 cm wider than the maximum width of the equipment, in no cases may the circulation

- paths conflict with work stations (R.I. Art 4.2.2);
- work stations must be organized so that they do not cause mutual interference and prevent contamination while handling foods (R.I. Art. 4.2.2 and Chapter II, Annex II of EC regulation 852/04).

Food service area

- **Mean height** of no less than 2.70 m and minimum height no less than 2.10 sqm (R.E. Art. 34);
- **Natural direct ventilation** through openings with area equal to 10% of the net floor area of the food service area (R.E. Art. 40 and ff); If natural ventilation is insufficient it may be supplemented or replaced by a climate control system meeting the requisites specified in R.L.I. Art. 3.4.7, letters a and b;
- **Natural direct lighting** through openings with area equal to 10% of the net floor area of the food service area (R.E. Art. 43 and 44). Natural lighting may be supplemented or replaced by artificial lighting;
- **Foods:** displayed foods must be kept at a suitable temperature and protected from contamination by glass cases or similar means.



Natural lighting

It is strongly recommended to use natural lighting where possible, so that lighting in the rooms is sufficient and appropriate to allow all relevant visual functions. The quantity and quality of the light must ensure a comfortable, efficient and safe environment for its occupants

Waste disposal methods

For clarity's sake, the "Collection of waste" section in the "Design, Construction, Set-up and Dismantling Guide" is presented below: "... a collection room/ intermediate storage area must be provided where waste packets/bags (with specific dimensional requirements and separated by type as indicated by the Organizer) can be collected before they are removed and transported off the Expo Site.



The waste collection facility must be designed to accept:

1. organic wastes separated into: gardening wastes; kitchen wastes; organic fraction of municipal wastes generated by staff and visitors;
2. miscellaneous wastes generated by exposition or commercial activities and personnel, partially separable into different categories following the establishment of source-separation waste collection systems (e.g., paper and cardboard, glass, wood, plastic, steel, aluminium, electrical/ electronic devices, other wastes)."

In addition to these rules, the following guidelines must be followed regarding waste disposal method:

- Food waste, non-edible by-products, and other discarded material must be removed as quickly as possible from the rooms where food is kept to

prevent accumulation;

- The collection bins must conform to the guidelines for source-separated waste collection.

The waste collection room must have the following characteristics:

- *waste storage areas must be built and dimensioned to ensure retaining of odours and liquids and a one-day storage period.* ("Design, Construction, Set-up and Dismantling Guide")
- minimum height of 2.00 m (R.E. Art. 61);
- airtight metal door of minimum dimensions 1.00 x 1.80 m;
- rounded seamless junction between flooring and wall finishing materials, which must be smooth, impermeable and easily washed;
- vent pipe placed at a distance of at least 10 m from the opening to the closest occupiable space, if the space is not part of the building structure. Otherwise, the vent pipe shall extend beyond the roof;
- availability of hook-up for water supply with wand outfitted with an appropriate anti-syphon device;
- drains for wash water outfitted with traps;
- systems to ensure adequate prevention of entry by rats or insects.

CAFÉS AND SNACK BARS

PRE-PACKAGED DELI PRODUCTS

DEFINITION

Places that serves cold dishes or where hot (re-heated) food is served (i.e., bar service, cafeteria, snack-bar).

REQUISITES

As regards: kitchen/food-prep room, activated aeration, exhaust and ventilation, toilet facilities, changing rooms, food storage, and waste disposal methods, the requisites are IDENTICAL to those described for Restaurant activities.

With the exception of the following characteristics:

Food service area

- **bar** outfitted with separate work areas and sinks for the various operations (café, food preparation and handling); displayed foods must be kept at a suitable temperature and protected from contamination by glass cases or similar means (R.L.I. Arts. 4.3.3 and 4.3.4, DPR 327/80 Art. 31);
- **preparation of snack bar product and pre-packaged deli foods** require participants to create a dedicated space in a minimum area of 4sqm (R.I. Art. 4.5.7, letter A) suitable in any case for the preparation of foods if the bar is used for this purpose. If a dedicated room is provided for food preparation, it must have dimensional characteristics identical to those for the kitchen described above but without equipment for cooking foods.



FOOD-PREP ROOMS FOR PRODUCTION AND SALES

DEFINITION

Rooms and food-prep rooms for the production, preparation and packaging of foods that are sold in the rooms but not consumed there.

REQUISITES

As regards: kitchen/food-prep room, activated aeration, exhaust and ventilation, worker toilet facilities, changing rooms, food storage, and waste disposal methods, the requisites are IDENTICAL to those described for Restaurant activities.

With the *exception* of the following characteristics:

Public toilet facilities

Public toilet facilities are not required, only worker toilet facilities are required.

Sales room

- **Average height** of no less than 2.70 metres, minimum height of 2.10 metres;
- **Net floor area** no less than 8 sqm;
- **Natural direct ventilation** through openings with area equal to 10% of the net floor area of the food service area (R.E. Art. 40 and ff). If natural ventilation is insufficient it may be supplemented or replaced by a climate control system meeting the requisites specified in R.L.I. Art. 3.4.7, letters a and b;
- **Natural direct lighting** through openings with area equal to 10% of the net floor area of the food service area (R.E. Art. 43 and 44). Natural lighting may be supplemented or replaced by artificial lighting;
- **Free spaces** for customer circulation with usable width no less than 100 cm;
- **Foods**: displayed foods must be kept at a suitable temperature and protected from contamination by glass cases or similar means.

KIOSKS

DEFINITION

Kiosks are small outdoor structures, often freestanding, open on one or more sides or having an open serving window.

REQUISITES

Structural specifications (R.I., Art. 4.3.16).

- Kiosks must be made of cement, masonry, wood or other materials that are certified as being suitable, and must be positioned far from health hazards and sources of dirt/contamination.
- Kiosks must have seamless, durable, waterproof and washable floors, washable walls, a drinking water supply system, a solid waste collection system, and a wastewater/liquid waste channelling and discharge system outfitted with a suitable trap.
- Kiosks must be hooked up to the electricity grid or be equipped with an autonomous energy renewable system.
- Kiosks must have a suitable dishwashing system.
- Kiosks must have a seamless, durable work surface made of an impermeable, washable and oxidation-resistant material.
- Kiosks must have food storage equipment that is appropriate for the types of food offered.
- Kiosks must be raised above the ground by at least 30 cm on three sides. An exception is made for kiosks selling fresh fruits and vegetables



OUTDOOR FOOD DISPLAY

- Suitable conservation and protection systems are required to protect foods displayed outside of the kiosk from any possible sources of contaminants. Fresh, raw or cooked food products, whether packaged or unpackaged, must not be displayed in open containers but must be contained in closed showcases or other similarly protective display systems, and must be kept at legally required temperatures. (R.I., Art. 4.3.14).
- Cold-chain management must be guaranteed for all perishable foods.
- Fruit and vegetables must be kept in baskets/bins made of a suitable material and raised above the floor/ground level by at least 20 cm. (R.I., Art 4.3.15)

TOILET FACILITIES

- At least one toilet facility for exclusive use by food & beverage personnel must be available. Said facility may be located in the pavilion (R.I., Art.4.3.16)
- Public toilet facilities are not required

FOOD SERVICE IN ACCESSORY AREAS

Accessory facilities or outdoor areas for food service must be appropriately protected from sources of contaminants (pollution/dirt) using easily cleaned systems (including awnings or canopies which may be retractable).

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