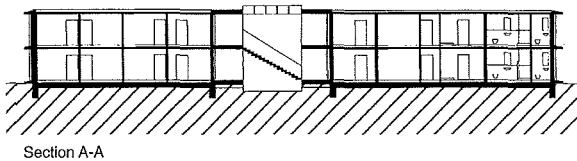
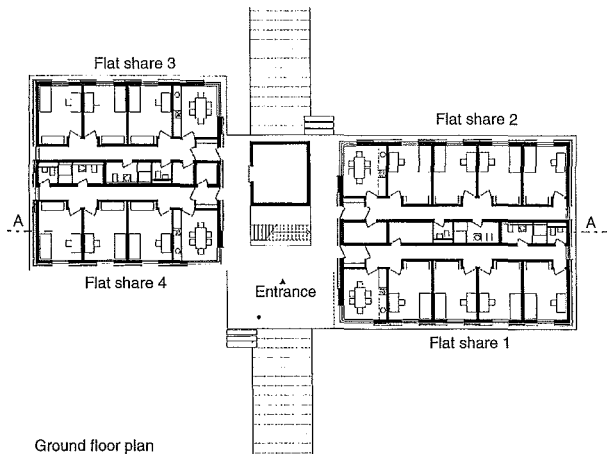


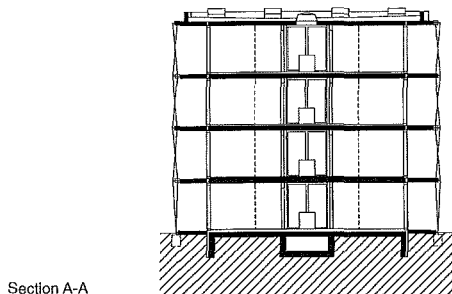
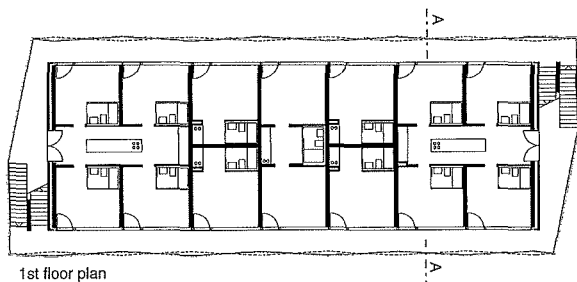
STUDENT RESIDENCES

General Design Notes



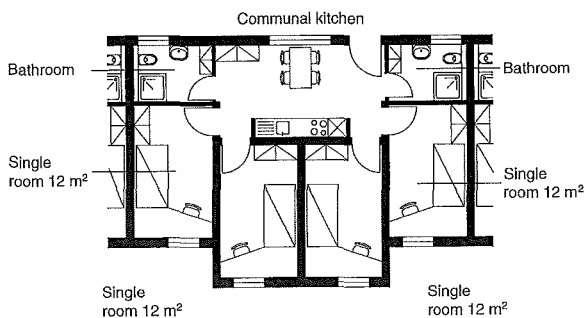
1 Student residence in Halle/Saale

Arch.: Gernot Schulz
in: Hillebrandt + Schulz, Cologne



2 Student residence in Garching

Arch.: Fink und Jocher, Munich



3 Shared flat with single rooms, communal bathrooms and central communal kitchen

Halls of residence are normally provided near colleges and universities for students and are normally built and operated in various architectural forms (20–30 units in courtyard layout or groups of open structures, large buildings with 80 or more units). They are used for the accommodation of students for the duration of their course. The size and equipping of the rooms is often very limited. Options such as single rooms, (double) flats and flat sharing groups have proved successful. The arrangement and design of the communal areas within and around the residences are decisive for their acceptance.

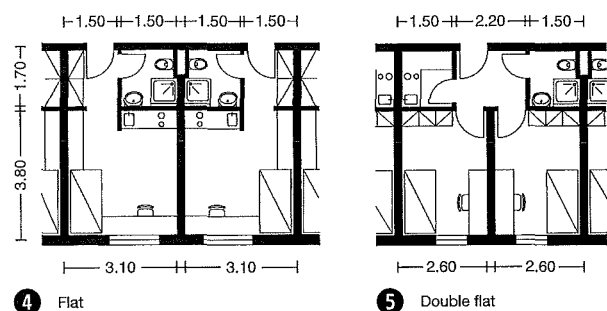
Requirements

Student flats are 'living places' and not considered as residential homes in the sense of the building regulations. The general requirements of the building regulations essentially concern residential rooms with minimum requirements for floor area (8 m²), ceiling height (2.40 m), orientation, ventilation and lighting (window area $\frac{1}{8}$ of the room area), accessibility requirements (i.e. for disabled people) and escape routes (two independent escape routes from each floor, one of which is a legally essential stairway). The **state guidelines for student residences** set recommended dimensions for living places (approx. 12 m² for single rooms and approx. 16 m² for flats). In addition to this, a certain area will be required for communal use.

Forms of living

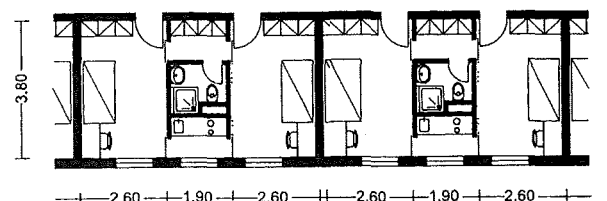
These can be categorised into **flat sharing** → 2 – 3 and **individual rooms** → 4 – 6.

When flats are shared, the communal area is of more importance, similar to a home. A group of rooms (4–8) with some functions transferred to the communal area (kitchen, bathroom) has a **linear** → 2 or **central** → 3 type of layout. Single rooms located along a corridor with communal bathroom and kitchen form the classic (but anonymous) form of student residence. What has proved successful is the further development of the single room as flat → 4 (room with shower room and perhaps kitchenette) and the double flat → 5 – 6 (two rooms with communal kitchen and bath). This latter form of residence can be used very flexibly by singles and also by couples (with child).



4 Flat

5 Double flat



6 Double flat with communal bathroom, kitchen and cupboard zone

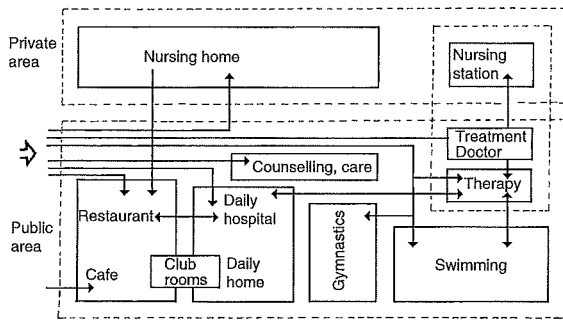
Accommodation

STUDENT RESIDENCES MBO

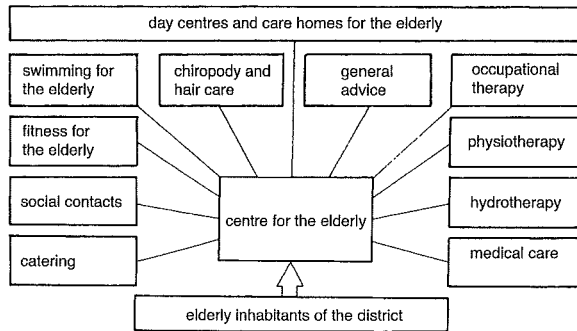
State guidelines
for student
residences

ELDERLY PEOPLE'S ACCOMMODATION

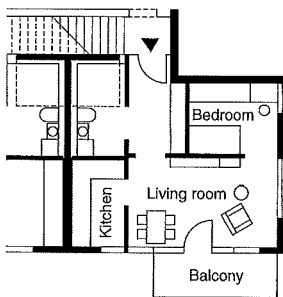
Retirement Flats



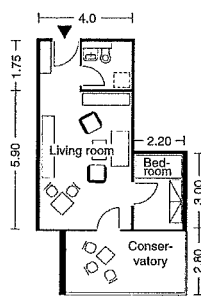
1 Relationship diagram



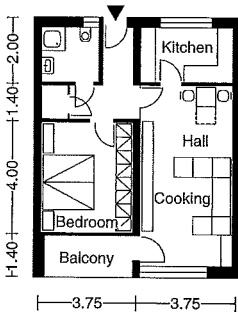
2 Functions of a centre for the elderly



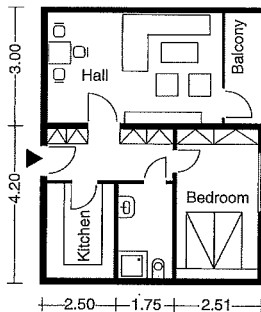
3 One-person retirement flat, 40 m²



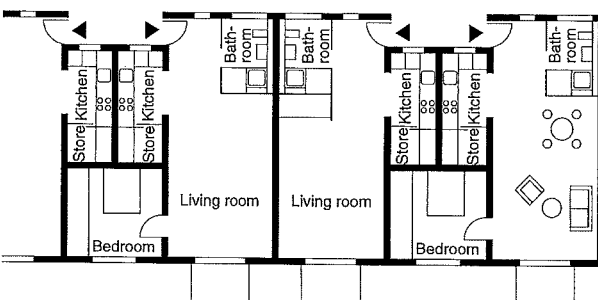
4 One-person retirement flat, 37 m²



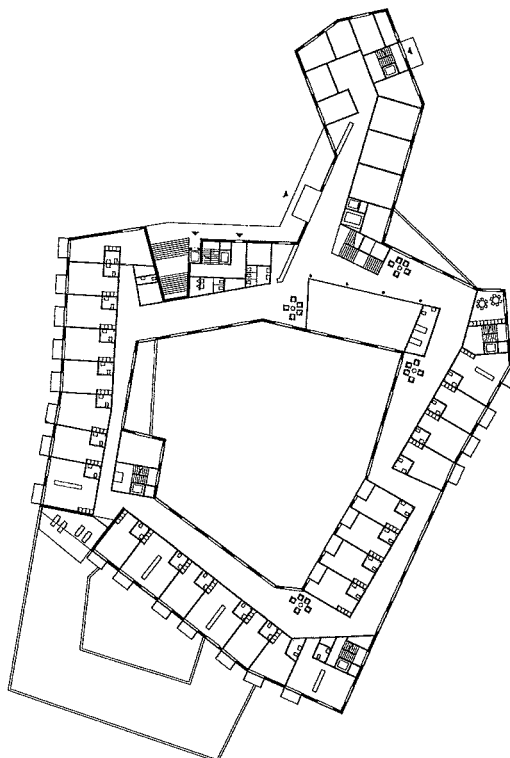
5 Two person retirement flat, 58 m²



6 Two-person retirement flat, 55.5 m²



7 Retirement flats



8 Centre for the elderly in Frauensteinmatte, Zug

Arch.: Graber Pulver

Accommodation for elderly people

A **retirement flat** → ③ – ⑥ is a self-contained flat which takes the needs of elderly people into account, so that they can live as independently as possible and not in an old people's home. Such housing is usually scattered around residential areas, with a density of 2–10%. One-person flat 25–35 m², two-person flat 45–55 m² with weather-protected balconies ≥ 3 m², min. depth 1.40 m, balcony door without threshold.

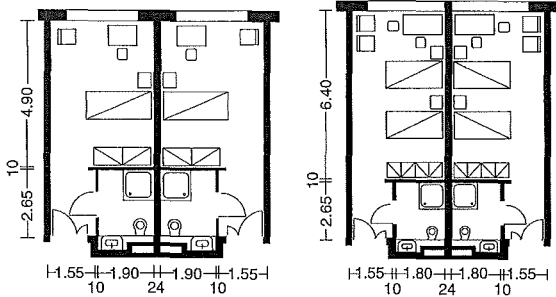
Assisted flats for the elderly (≥ 20 m² per flat) are in a building, supplemented by communal rooms with tea kitchen. Convenient if sited in the vicinity of a care home for the elderly with facilities for dining, recreation, relaxation and therapy. Features a nursing support point with ward bath, therapeutic work room, central washing-up kitchen and cleaning room. One car parking space per 5–8 occupants. Heating 2% above normal. Support of outpatient services for the elderly.

Home for the elderly with residential living and care facilities. According to the law concerning such homes, there are stringent regulations on planning, licensing and operation. The large ancillary areas mean that an economic size is about 120 places with the provision of care, function and therapy rooms. There is an integrated care department for short-term care. General fitting out: stair steps 16/30 cm without underlay, colour-highlighted step edges and handrails on both sides, also in the corridors. Lifts for moving patients on stretchers or in folding chairs. Accessible building standard applies. Location: as near as possible to town or village infrastructure and public transport.

Day centres for the elderly: function as meeting points and for outpatient care for independently living elderly people. Approx. 1600 elderly citizens per day centre. With meeting room (can be divided) up to 120 m², service and consulting room 20 m², rooms for movement and occupational therapies, changing rooms, group rooms, WCs, tea kitchen, bowling alley.

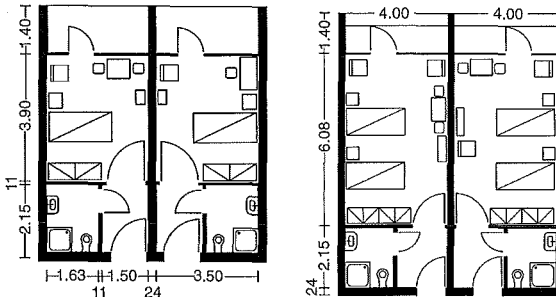
ELDERLY PEOPLE'S ACCOMMODATION

Nursing and Care Homes



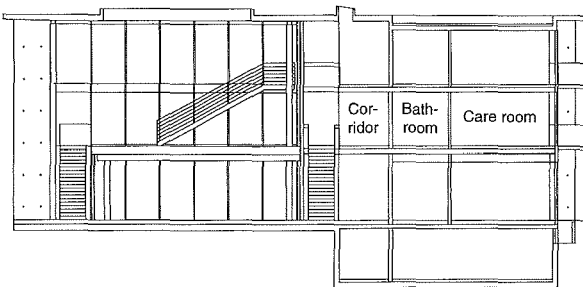
1 One-bed care room

2 Two-bed care room



3 One-bed care room

4 Two-bed care room



5 Section → 6

Nursing and care homes for the elderly

These provide nursing, support and care for chronically ill and other vulnerable elderly people. Activating therapy is intended to exercise, maintain and rehabilitate failing powers via medical and care-related assistance. There is a clear separation of residential and operational areas → 6.

Guideline dimensions: residential = 50% individual rooms = 18 m² single rooms, 20 m² double rooms → 1 – 4. If the bedroom is separate = 7 m² single, 12 m² double room. The entrance should if possible have a minimum size of 1.25 m x 1.25 m (suitable for wheelchairs) and the wet cell should be fitted with WC, washbasin and shower.

A residential group consists of approx. 8–10 elderly people with communal living room and tea kitchen, in which meals are also taken. One adapted bath is required for every two residential groups. Corridor zones and niches can be used for communication and group building.

Room requirements:

- nurses' sitting and handover rooms (support points)
- WC and cloakroom
- care department incl. bathroom with acid-resistant bath (also suitable for medical baths), washbasins, WC, bidet and shower
- cleaning room with bucket sink and sluice for human waste
- washroom
- subsidiary room for equipment and wheelchairs
- centralised facilities can be situated in the ground floor and basement or distributed in the individual departments.

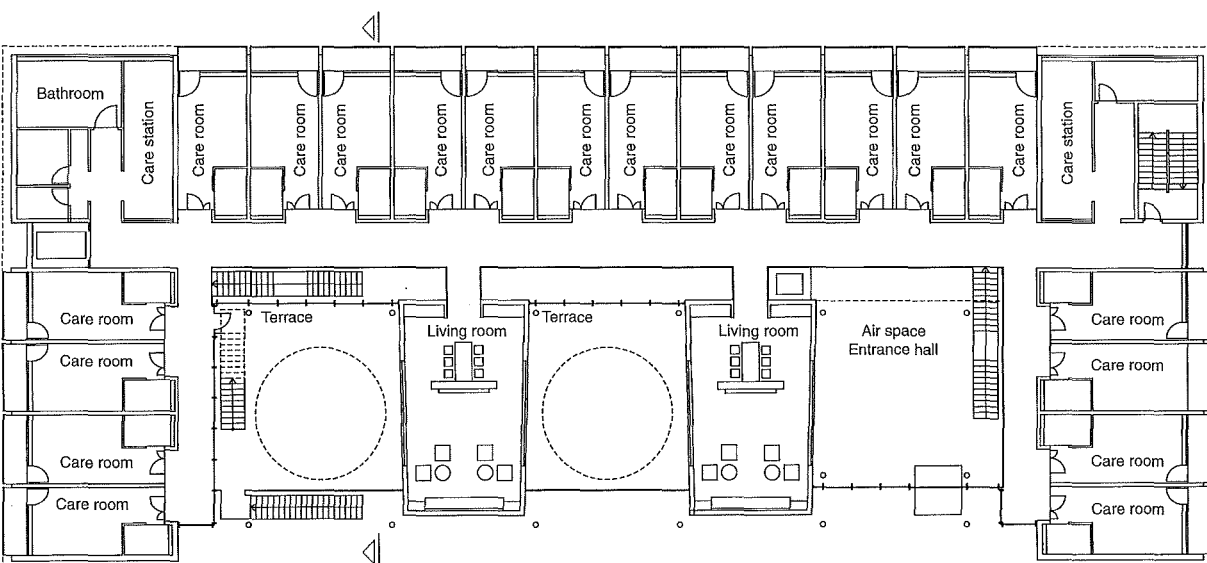
The short-term care department takes in those temporarily in need of care while their relatives are on holiday, and also provides hospital aftercare, rehabilitation etc.

Space should be provided for administration, consulting rooms, function and common rooms, cafeteria, occupational therapy, gymnastics, chiropody and hairdresser.

Accommodation

ELDERLY PEOPLE'S ACCOMMODATION

Retirement flats
Nursing and care homes
Examples

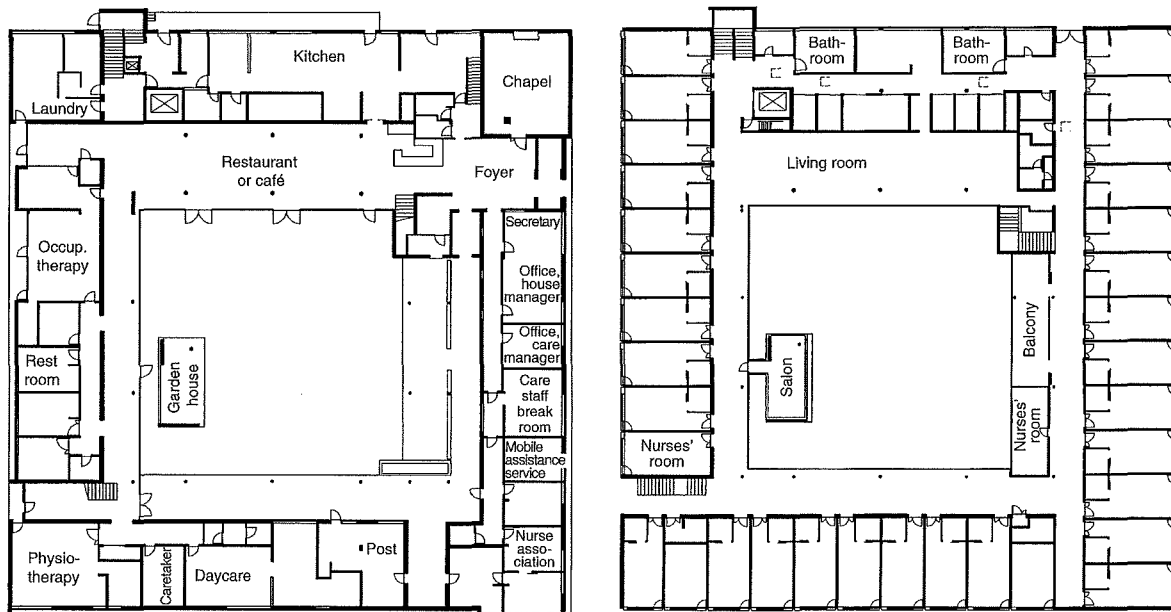


6 'Haus Gisingen' care home for the elderly, Feldkirch/Vorarlberg, first floor

Arch.: Noldin & Noldin

ELDERLY PEOPLE'S ACCOMMODATION

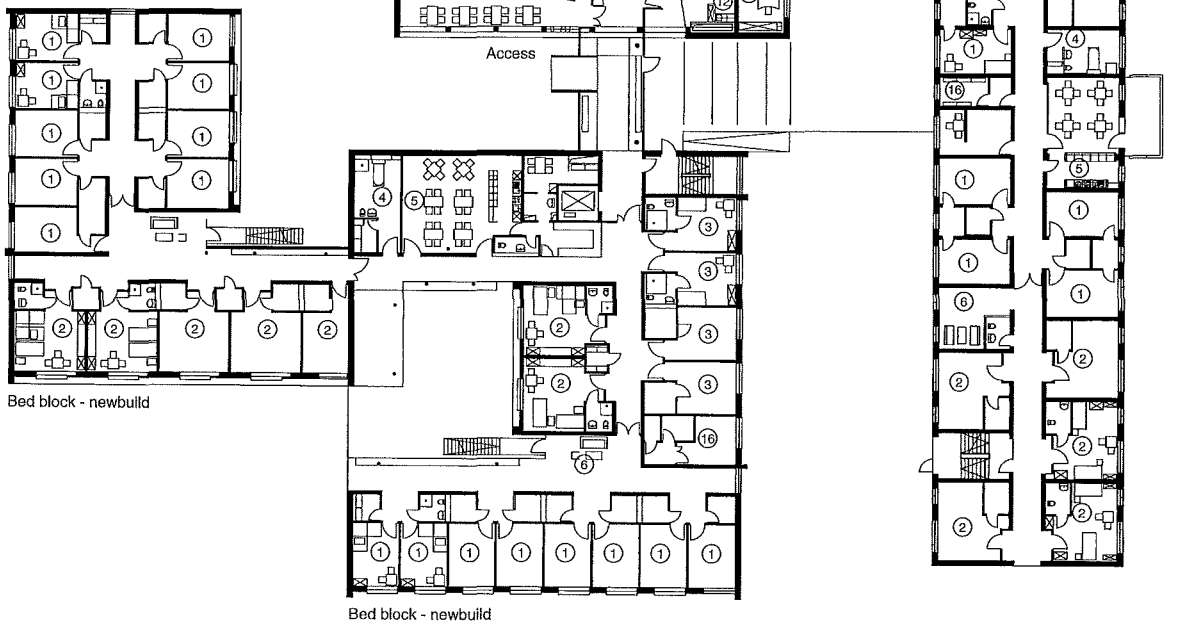
Examples



1 'Haus Nofels' care home for the elderly, Feldkirch/Vorarlberg, ground and first floors

Arch.: Rainer Köberl

- 1 Single-bed room 16 m²
- 2 Double-bed room 24 m²
- 3 Wheel chair room 18 m²
- 4 Ward care bathroom
- 5 Lounge/group room
- 6 Meeting point
- 7 Restaurant and event room
- 8 Kitchen
- 9 Servery
- 10 Home manager/administration
- 11 Ward sister
- 12 Reception/kiosk
- 13 Visitors' WC
- 14 Aviary
- 15 Hairdresser
- 16 Side room

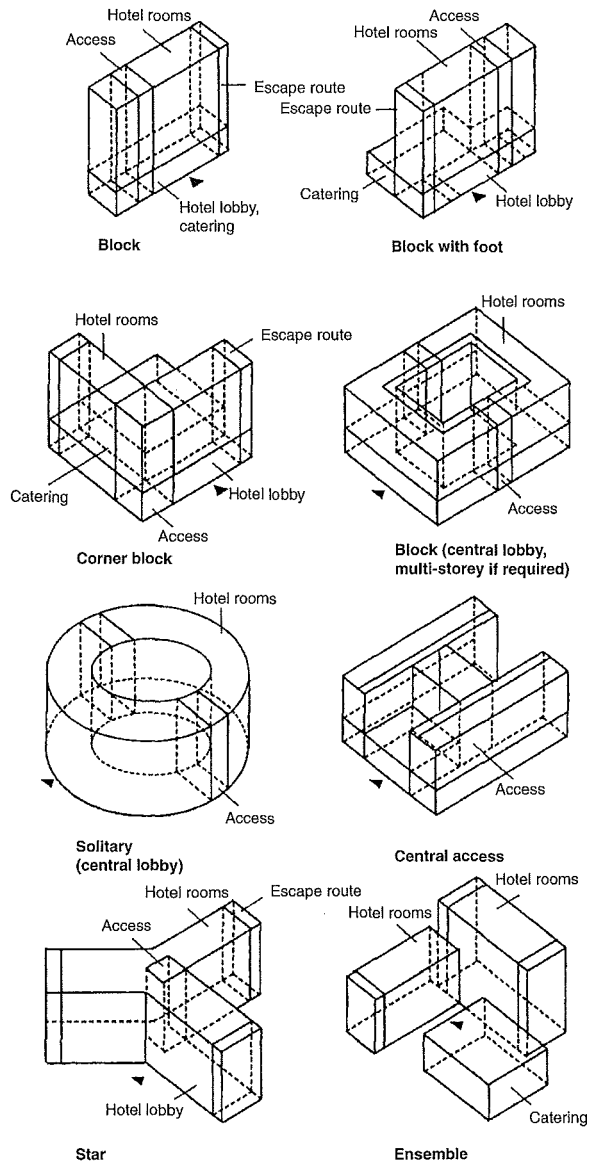


2 'Elbe Fläming' care home for the elderly, Dessau-Rosslau, ground floor

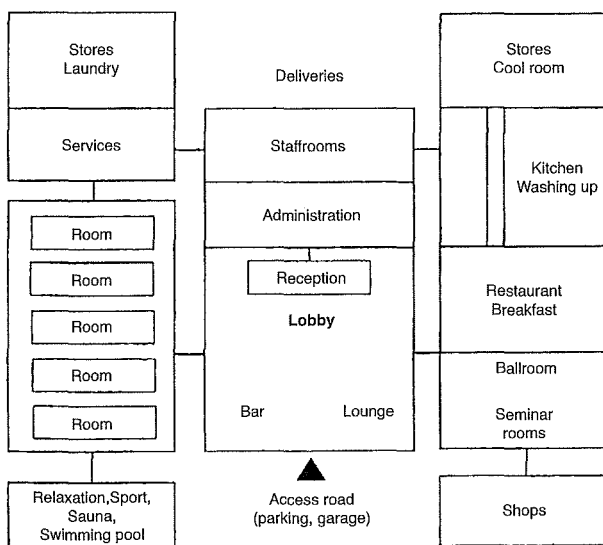
Arch.: Kister Scheithauer Gross

HOTELS

Basics



1 Basic forms of hotels



2 Room and access scheme of a hotel

The hotel, formerly a business offering accommodation and catering, often with exclusive flair, has today become a complex and efficient (mass) service provider business with a wide spectrum of possibilities (conferences, wellness, holidays).

There are hotels in various price and comfort classes, which are classified according to five categories → p. 172. A scheme of the basic room and route relationships within a hotel is shown in → 2.

The essential areas are: **hotel lobby and reception** as the central, well-arranged and prestigious nerve centre between the various parts of the operation, **catering area** in connection with the hotel lobby (extent of the services depend on the hotel category), **administration**, a staff area, which is separately accessed and partly in direct connection with other areas of the hotel, **guest room area** with differentiated rooms and individual access areas arranged under the aspects of category, orientation and noise screening, **service area** with kitchens, store and associated rooms. The percentages of hotels' surface areas required for the various functions are shown in → 4.

Accommodation

HOTELS

Basics
Rooms
Examples

Accommodation
Regulations
(BeVO)

see also:
Catering
pp. 174 ff.

Building regulations, building law code, zoning plans, etc.	general preconditions for the permissibility of a project; type and extent of the building use etc. → p. 56
MBO	general construction requirements for buildings and building elements, general fire protection requirements
DIN 4107	noise protection requirements, see → p. 480
Accommodation regulations	additional construction requirements for buildings and elements for the accommodation of large numbers of people (constructional requirements on walls, columns, floors, doors, escape routes, legally essential corridors, alarm systems, safety equipment etc.)
Catering guidelines	additional construction requirements for catering establishments (mostly related to fire protection)
Public assembly places regulations	additional construction requirements for buildings and elements in relation to the presence of crowds (escape routes, exits, corridors, windows, doors etc.)
Workplace regulations and guidelines	additional construction requirements for buildings and elements concerning health and safety at the workplace
Other requirements	e.g. requirements of the accident insurers, accident prevention regulations, health inspectors, trade supervisors

3 Laws, guidelines, provisions and regulations for the design of businesses offering accommodation and catering (excerpt)

1.	guest rooms, bathrooms, corridors, room service	50–60%
2.	public areas, lobby, reception etc.	4–7%
3.	catering	4–8%
4.	events, ballroom, seminar rooms	4–12%
5.	wellness/ fitness area	5–10%
6.	other areas, cosmetics, hairdresser	1–2%
7.	management, administration	1–2%
8.	service area, kitchen, staff rooms, stores	9–14%
9.	building services	5–10%

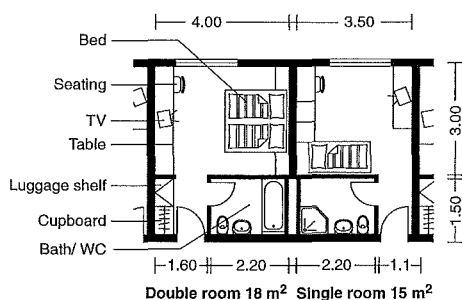
Parking and garage areas and special areas (e.g. wellness and bathing area) are also to be taken into account (and can vary widely according to the range of services)

	Hotel type	m ² /room
1.	luxury	90–110
2.	first class	60–70
3.	comfort	50–60
4.	standard (holiday hotel, motel)	40–60
5.	tourist (low-budget)	15–20

4 Guideline values for (above) shares of hotel surface area taken by each function and (below) gross areas per room in various categories of hotel

HOTELS

Rooms



1 3-star hotel rooms showing features and main dimensions (according to DEHOGA classification, single room slightly enlarged)

Hotel rooms account for the largest share of a hotel by area. The quality of hotel rooms is an essential criterion for the evaluation of a hotel by a guest. Traditionally, the trend has been to standardise and schematise floor plans and arrangements → 1.

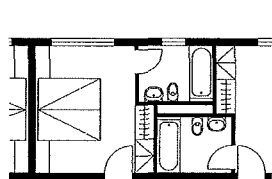
In light of the extended significance of the hotel room (living, relaxation, work and sleeping room), architects normally attempt to answer the economic and technical requirements by reflecting the demand for comfort through spatial division, while still meeting concerns for individuality and identity 2 – 11.

Accommodation

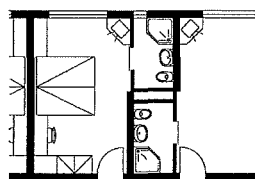
HOTELS

Basics Rooms Examples

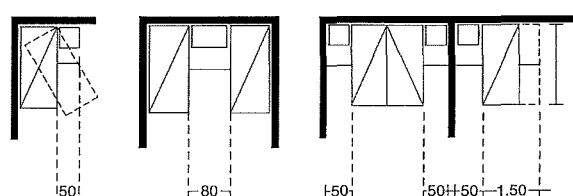
German
Hotel and Inn
Association
(DEHOGA):
German hotel
classification



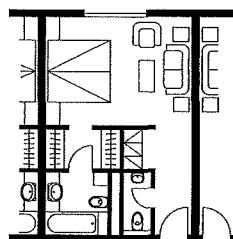
2 Bathrooms between hotel rooms



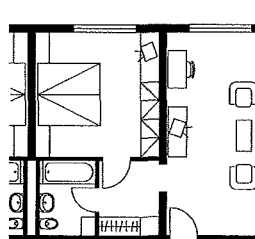
3 Bathrooms between hotel rooms



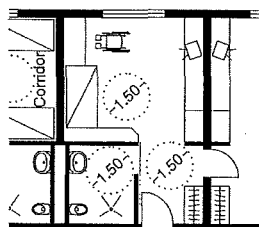
10 Minimum distance between hotel beds



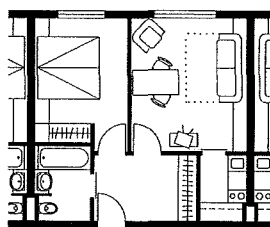
4 Hotel room with extra WC



5 Two-room apartment



6 Hotel room accessible for a disabled person with space for accompanying person → p. 21



7 Two-room apartment with small kitchen

Hotel room features, according to DEHOGA (excerpt)

According to the classification system of the German Hotel and Inn Association (DEHOGA), there are five categories, essentially determined by the room's size and features:

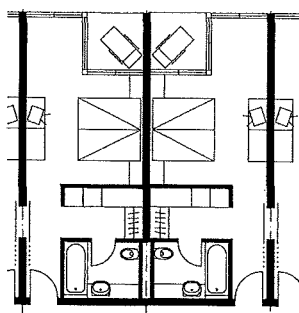
1 Star (Tourist): single room 8 m², double room 12 m² (minimum area for 75% of the hotel rooms, without bathroom), bed, wardrobe, seat, washbasin in the room, reception as a separate area

2 Stars (Standard): as before, but single room 12 m², double room 16 m² (minimum area for 75% of the hotel rooms, including bathroom and corridor), bathroom in room (for 70% of hotel rooms), seat per bed, colour television (in 70% of the hotel rooms)

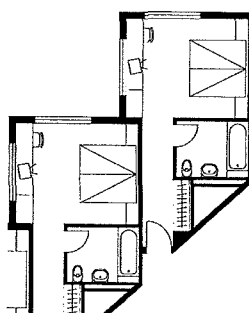
3 Stars (Comfort): as before, but single room 14 m², double room 18 m² (minimum area, see above), bathroom in room (for all rooms in the hotel), telephone, reception area with seating for group, independent reception

4 Stars (First Class): as before, but single room 16 m², double room 22 m² (minimum area, see above), minibar, armchair/couch with coffee table, lobby with seating and drinks service

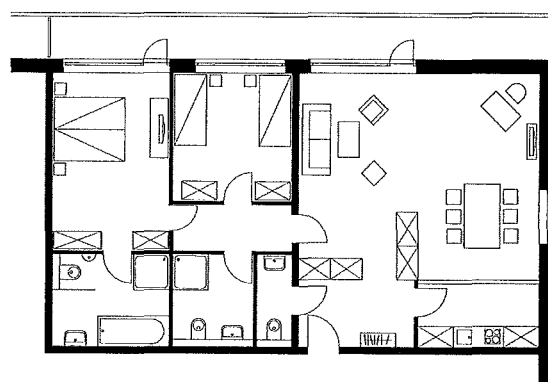
5 Stars (Luxury): as before, but single room 18 m², double room 26 m², (minimum size, see above), 2% of the hotel rooms as suites (at least two), each with an armchair/sofa per bed, additional washbasin in double rooms and suites, additional colour television in suites, reception lobby.



8 Hotel room with cupboard zone and balcony



9 Diagonal room arrangement



11 Three-room apartment (suite) with cooking niche, two bathrooms and guest WC

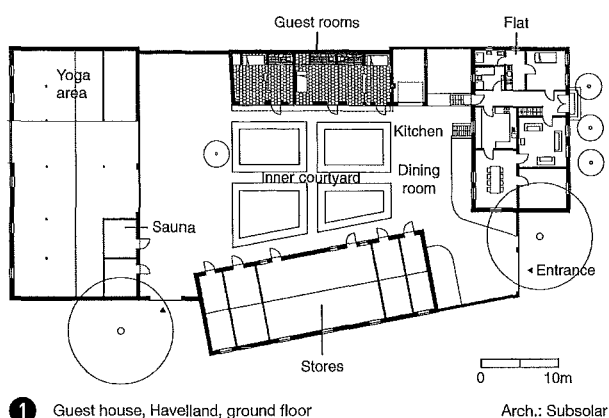
HOTELS

Examples

Accommodation

HOTELS

Basics
Rooms
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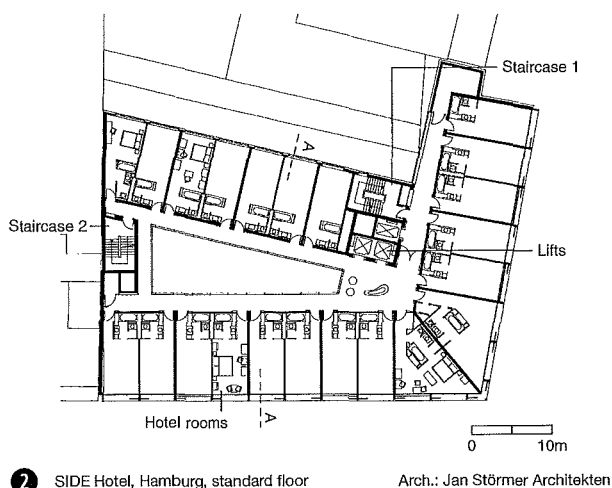
1 Guest house, Havelland, ground floor

Guest house in a village environment

The 'Hof der Stille' guest house → 1 is located in the buildings of a converted courtyard in an agricultural village in the Havelland near Berlin.

The individual buildings of the former farm are arranged around an internal yard, which, in the place's new identity, serves the role of central access and orientation in the conversion. This also forms a spatial and visual focus point with the ambience of a cloister. The simple guest rooms fitted out in the former stables, the main house with dining room, lounge and seminar rooms, the flat belonging to the owner and the former barn containing sauna, fitness and relaxation area are all directed toward this centre.

The individual guest rooms have the character of apartments. They are equipped within the least possible area with a wet cell and mini-kitchen arranged in the back of the apartment as an 'installation rail' along the boundary wall to the neighbouring property.

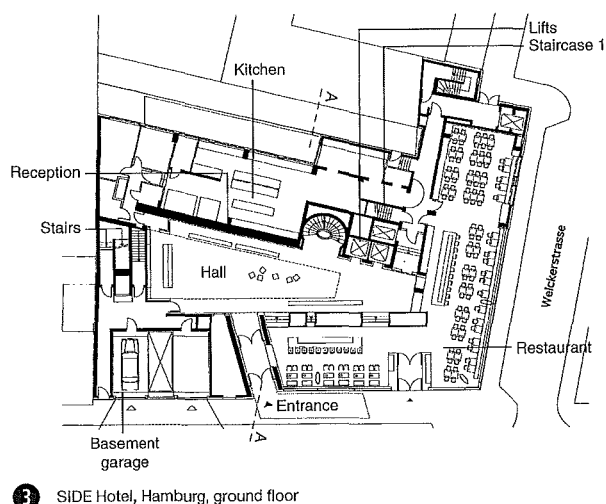


2 SIDE Hotel, Hamburg, standard floor

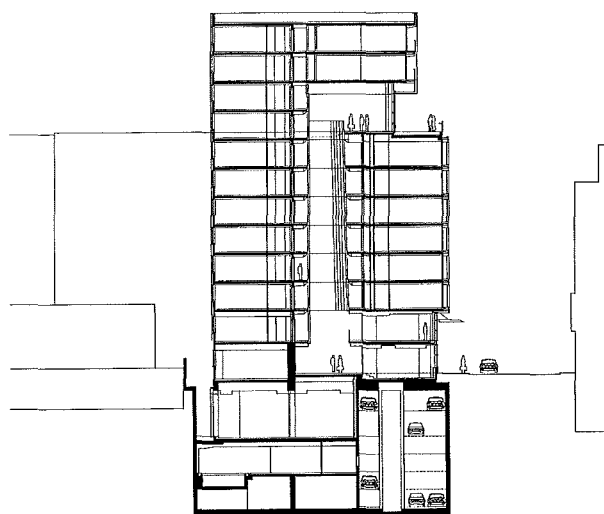
Luxury hotel in an urban context

The SIDE Hotel in Hamburg → 2 – 4 is part of an urban block and has an (obtuse) corner → p. 171. Its shape results from an external angle (which fits the block structure) and a rearward block, which is four storeys higher than the angle and surmounts it. Between these, a 'Sky Lounge' on the eighth floor, a naturally lit 30 m high hotel lobby, forms the central architectural element. This mediates between the angles of the street alignments and is also the integrating and orienting core of the ensemble.

On the standard floors → 2, the hotel rooms (all of 5-star grade) are mostly arranged around the open space of the lobby, with bathrooms parallel to the corridor as a one-sided access gallery system. In the corners and also on the first and twelfth floors are the suites (partially built over the lobby). Restaurant and conference rooms are situated in the corner on the ground and first floors. The kitchens and administration are in the rear part of the ground floor and the large conference rooms (with daylight entering through a light well), spa, swimming pool and underground car park and services areas are in the four basements.



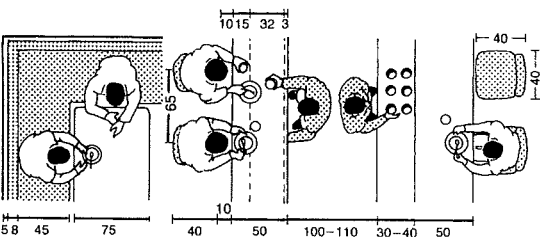
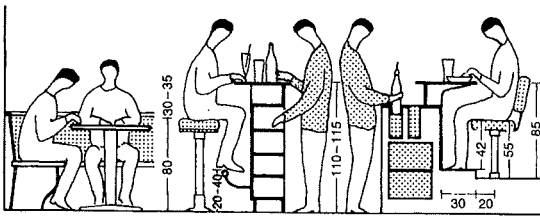
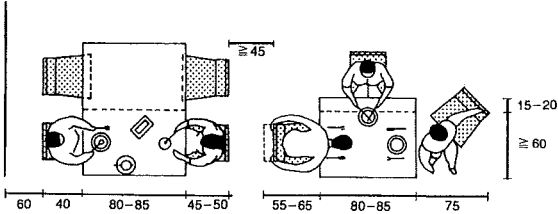
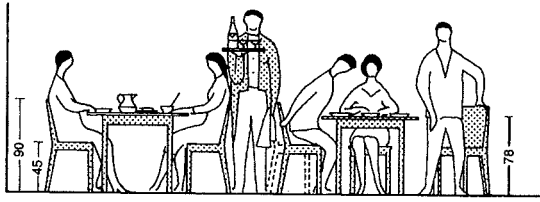
3 SIDE Hotel, Hamburg, ground floor



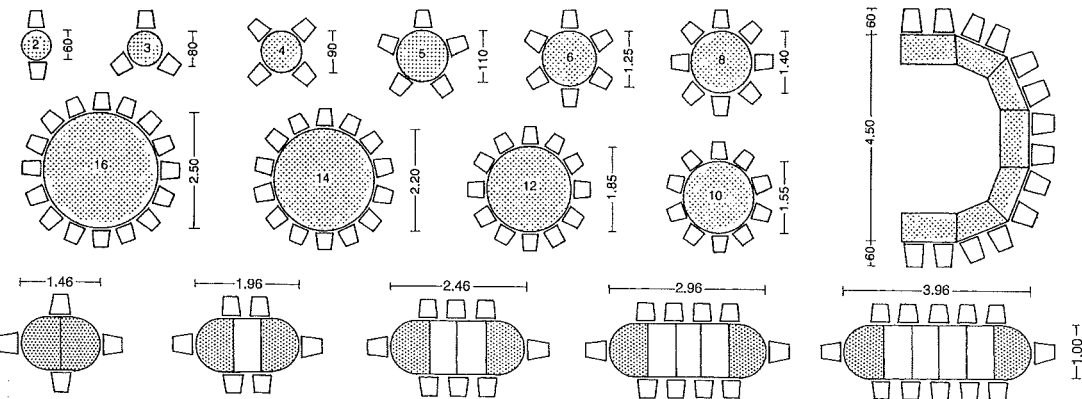
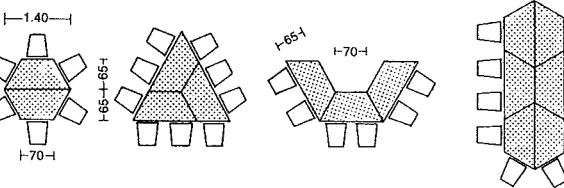
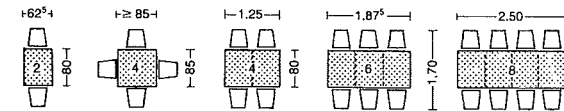
4 SIDE Hotel, Hamburg, A-A section

CATERING

Restaurants



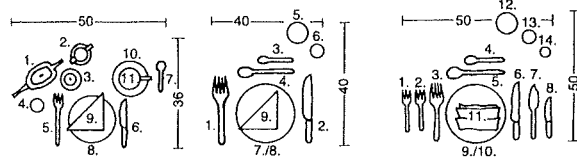
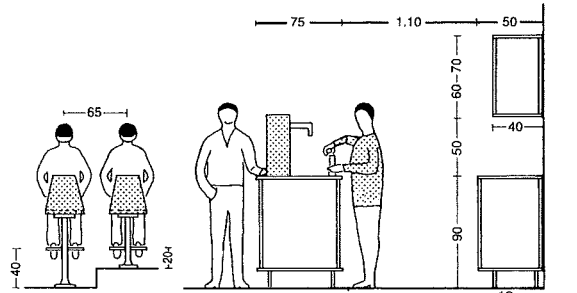
1 Space required for waiter and diner



5 Tables/seating

To be able to eat in comfort, one person requires a table area around 60 cm wide and 30–40 cm deep → 2–4. This provides sufficient distance between adjacent diners. Although an additional 20 cm space in the centre for dishes and large bowls is sometimes desirable, an overall width of 80–85 cm is suitable for a dining table. If the food is served on plates, then 70 cm is sufficient, and for fast food 60 cm table depth.

Distance between table and wall ≥ 75 cm → 1, because the chair alone requires a space of 50 cm. If the space between table and wall is also used for access, the distance should be ≥ 100 cm. Round tables need a little more space, a difference of up to 50 cm.



2 Breakfast

3 Informal dinner

4 Formal dinner

- 2 Breakfast setting: 1 tea or coffee pot; 2 milk jug; 3 jam or butter bowl; 4 sugar bowl; 5 dessert fork; 6 dessert knife; 7 coffee or tea spoon; 8 dessert plate; 9 napkin; 10 saucer; 11 coffee cup
- 3 Informal dinner setting: 1 fork; 2 knife; 3 soup or dessert spoon; 4 spoon; 5 beer glass, 6 wine or dessert wine glass; 7 soup bowl; 8 dinner plate; 9 napkin
- 4 Formal dinner setting: 1 dessert fork; 2 fish fork; 3 fork, 4 soup or dessert spoon; 5 spoon; 6 knife; 7 fish knife; 8 dessert knife; 9 soup bowl; 10 dinner plate, 11 napkin; 12 beer glass; 13 red or white wine glass; 14 liqueur or dessert wine glass

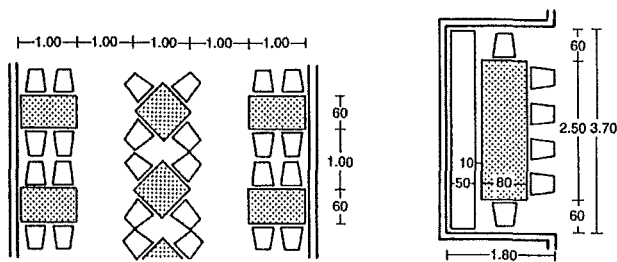
CATERING

Restaurants

Accommodation

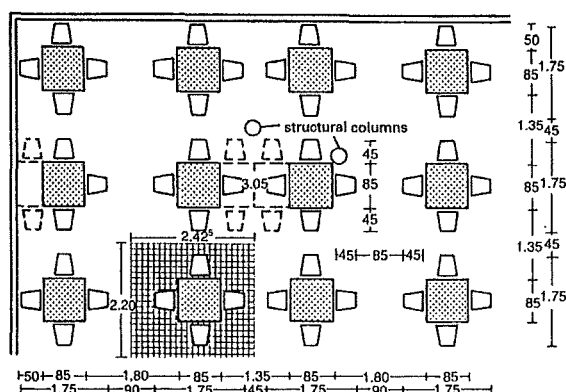
CATERING

Restaurants
Dining rooms
Fast food outlets
Restaurant
kitchens
Large kitchens
Examples

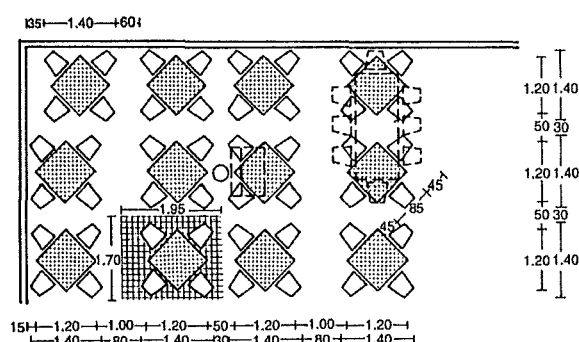


1 Closest seating layout

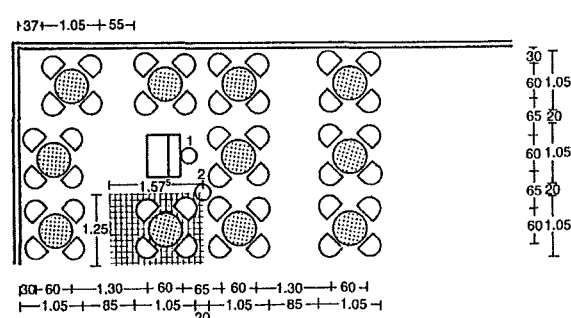
2 In an alcove



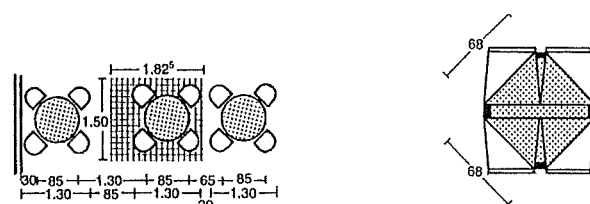
3 Parallel arrangement of tables



4 Diagonal arrangement of tables



5 Closest table spacing



6 Tables in a café

7 Zuntz table

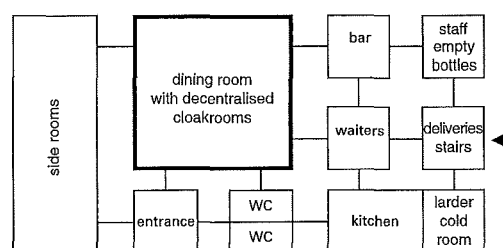
Before any restaurant or other catering establishment is built, the organisational processes must be determined with the operator. The following have to be decided: what food will be on the menu, what quality and quantity will be on offer? Which service system will be used, whether à la carte with fixed or changing daily menus, plate or table service, self-service or mixed? For design purposes, it is important to know which target clientele is aimed for. The site itself will help to determine the most suitable type of restaurant. Appoint specialists in: kitchen equipment, electrical, heating, ventilation and sanitary design.

The main room in a restaurant is the dining room. Its furniture and fittings should be appropriate for the business. A number of additional tables or chairs should be available, so that table groupings are flexible. Provide special tables for regulars. Side rooms and conference rooms should always be flexibly furnished in order to permit variations. A food bar with fixed stools can be arranged for customers in a hurry. Larger dining rooms should be split into zones. Kitchen, side rooms, toilets and sanitary installations should be grouped around the dining room, also in the basement → 8.

Columns in a dining room are best located in the centre of a group of tables or at the corners of the tables → 3. The ceiling heights of dining areas with a floor area $\leq 50 \text{ m}^2 = 2.50 \text{ m}$, $> 50 \text{ m}^2 = 2.75 \text{ m}$ and $> 100 \text{ m}^2 \geq 3.00 \text{ m}$; above or below galleries $\geq 2.50 \text{ m}$.

Emergency exits 1.0 m wide per 150 people using them. Minimum clear width of aisles in restaurants 0.80 m, doors 0.90 m → 9.

Toilets in public houses, bars or restaurants: Stairs to toilets, wash, staff and storage rooms, usable width $\leq 1.10 \text{ m}$. Clear walk-through height $\geq 2.10 \text{ m}$ measured vertically. Window area $\leq 1/10$ of the floor area of a restaurant.



8 Functional scheme of a small restaurant

Floor area of dining room	Usable walking width
$\leq 100 \text{ m}^2$	$\geq 1.10 \text{ m}$
$\leq 250 \text{ m}^2$	$\geq 1.30 \text{ m}$
$\leq 500 \text{ m}^2$	$\geq 1.65 \text{ m}$
$\leq 1000 \text{ m}^2$	$\geq 1.80 \text{ m}$
$> 1000 \text{ m}^2$	$\geq 2.10 \text{ m}$

9 Usable width of stairs

Type	Seat occupancy per meal	Kitchen floor area (m^2/cover)	Dining room floor area (m^2/seat)
exclusive restaurant	1	0.7	1.8–2.0
restaurant with rapid turnover, e.g. department store	23	0.5–0.6	1.4–1.6
standard restaurant	1.5	0.4–0.5	1.6–1.8
inn, guest house	1	0.3–0.4	1.6–1.8
for storerooms, personnel rooms etc., add approx. 80% cover = seat x seat turnover.			

11 Space requirements

Dining places	WCs, gents	WCs, ladies	Urinals, no.	Channel (m)
≤ 50	1	1	2	2
$\leq 50-200$	2	2	4	3
$= 200-400$	3	4	6	4
≥ 400	— decision for each case —			

10 Toilet facilities

Furnishing (tables)	No. places	Waiter (m^2/place)	Self-service (m^2/place)
square	4	1.25	1.25
rectangular	4	1.10	1.25
rectangular	6	1.00	1.05
rectangular	8	1.10	1.10

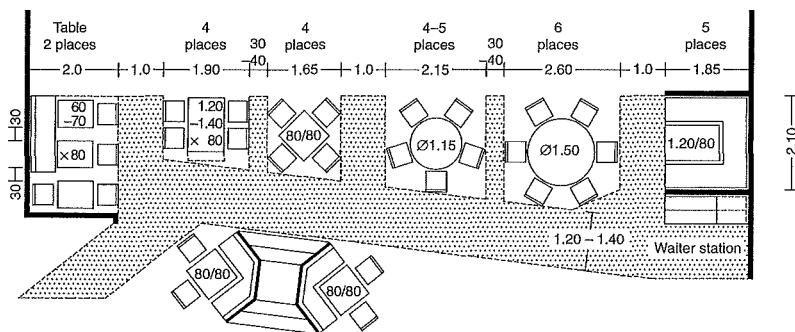
12 Total space required for dining room: 1.4–1.6 m^2/place

main aisles	min. 2.00 m wide
intermediate aisles	min. 0.90 m wide
side aisles	min. 1.20 m wide

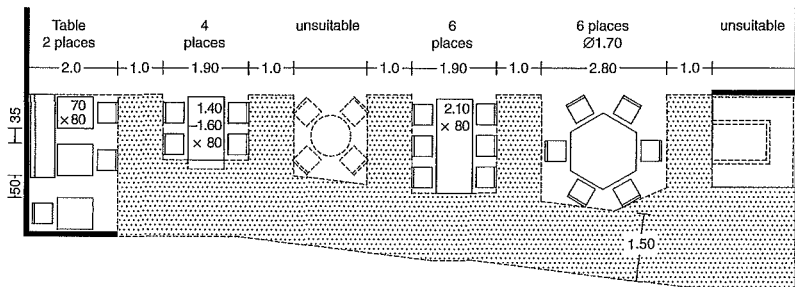
13 Aisle widths

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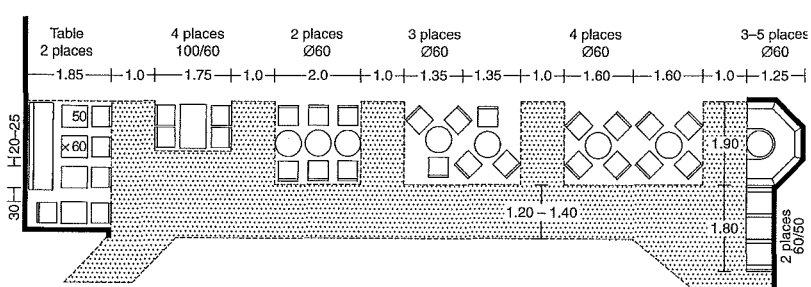
Dining Rooms, Service



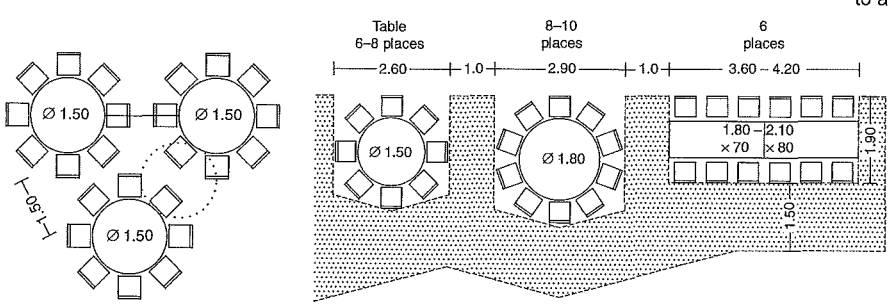
1 Table sizes in a restaurant: with predominantly plate service the table depth can be reduced to 70 cm



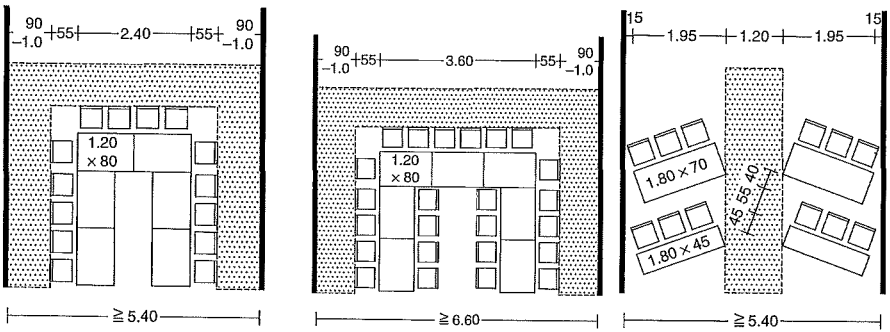
2 In a self-service restaurant



3 Bistro-café-bar



4 Banquet

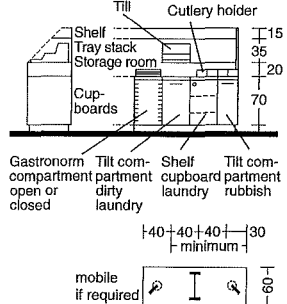


5 Corporate and seminar rooms

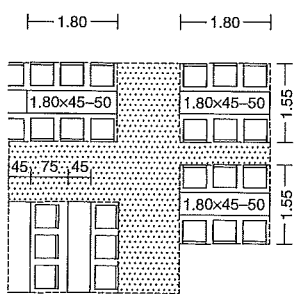
The space required varies very widely according to the character of a restaurant. Apart from fast food outlets, the least space required is in cafés. The most is needed in restaurants and diners. Diagonal arrangement of the tables generally takes up less space than an aligned pattern, with a space saving of up to 35%. Alcoves are beneficial for use of space because the distance between seats and wall is no longer required. In larger restaurants, many groups of tables (a waiter's 'territory') are collected together to form units.

Basically, the design of dining rooms based on 'number of heads = m²', formulas is to be avoided, as they are not applicable to rooms under 100 m² and can lead to false results. Fixing the dimensions of rooms should in any case be done from concrete furniture layout plans. The functional design of dining rooms involves determining the following:

1. Entrances and traffic axes, which limit the usable area, according to number and required width.
2. Service points (with the exception of variable forms of furniture): stations for 40 places each with at least one service point as centrally placed as possible.
3. Table sizes and shapes according to the character of the business and the expected guest structure. A good procedure is to design a percentage structure of desirable table sizes with various combinations, starting from the intended total capacity. Table sizes and shapes result from the intended use. Areas of about 20 (12-24) places are designed according to the character, type of business and intended visual organisation, to avoid the impression of a waiting room.



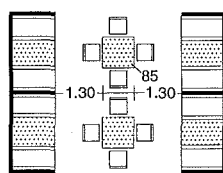
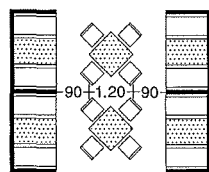
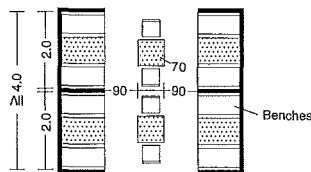
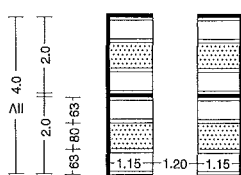
6 Waiter station → 1



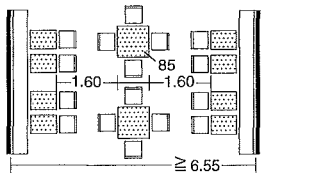
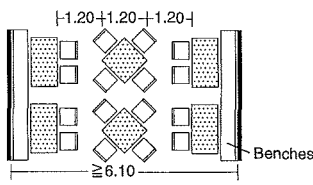
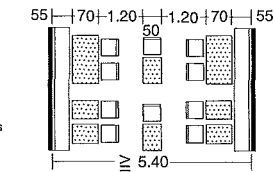
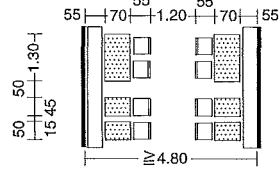
7 Events, meetings: without eating

Accommodation

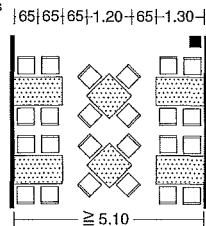
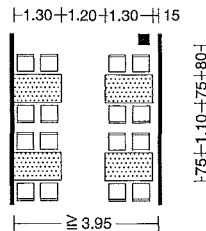
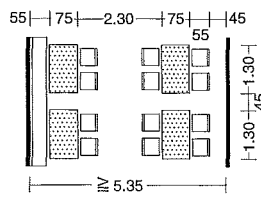
- CATERING
- Restaurants
- Dining rooms
- Fast food outlets
- Restaurant kitchens
- Large kitchens
- Examples



1 Seating arrangements



2 Seating arrangements, variants



3 Seating arrangements, variants

CATERING

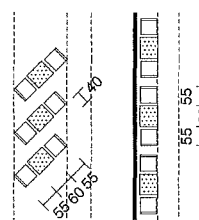
Fast Food Outlets

The heavy traffic of people resulting from fast turnover demands larger sales areas to ensure smooth operation. Tables and chairs are kept as small as possible and tightly grouped → 1 – 4. The customer space, 1.50–2.15 m² per person, features groups of seats and the longest possible bar at which to eat → 5 – 6.

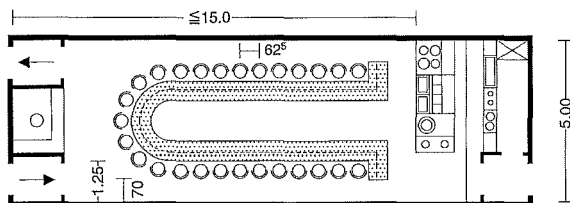
If the business is favourably placed to catch street traffic, a built-in kiosk will be able to serve food on the pavement as well as indoors → 7 – 8.

Accommodation

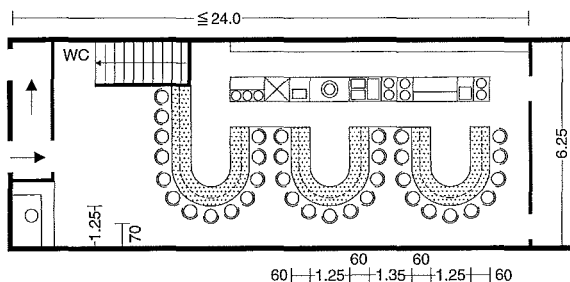
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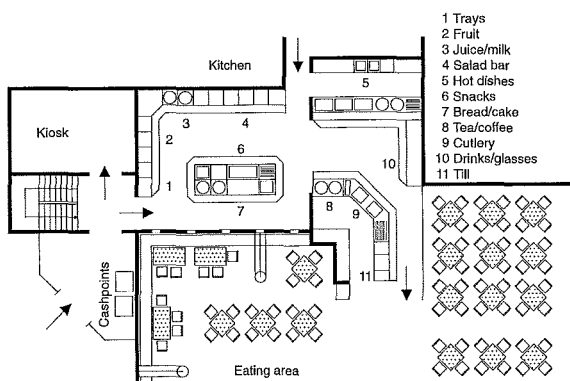
4 Seating arrangements, variants



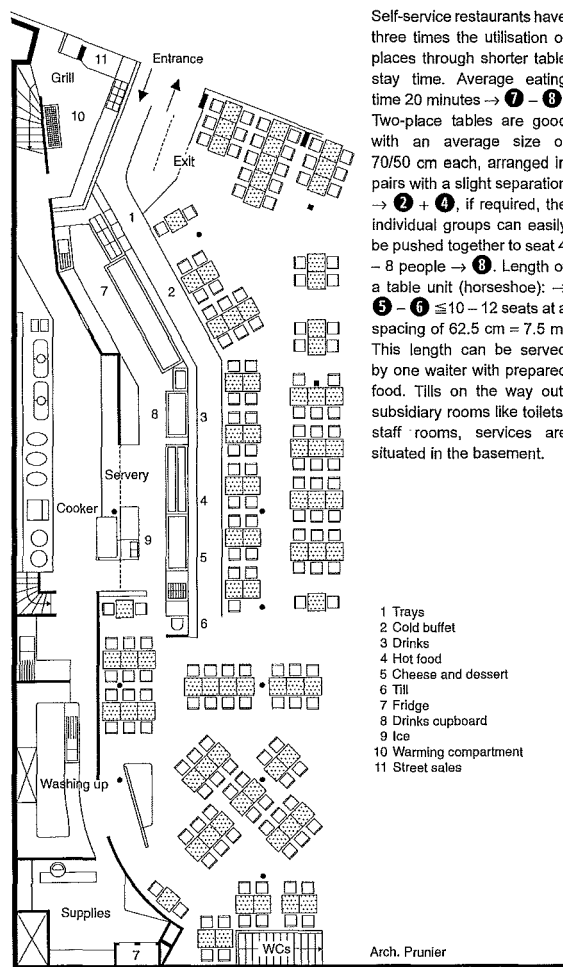
5 Space required for a horseshoe-shaped bar for eating



6 Space required for a horseshoe-shaped bar for eating, variant



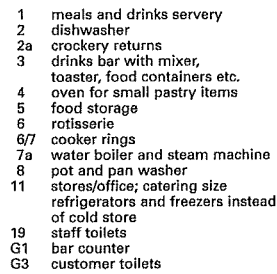
7 Example of a fast food restaurant, self-service



8 Fast food restaurant in Paris

Self-service restaurants have three times the utilisation of places through shorter table stay time. Average eating time 20 minutes → 7 – 8. Two-place tables are good with an average size of 70/50 cm each, arranged in pairs with a slight separation → 2 + 4, if required, the individual groups can easily be pushed together to seat 4 – 8 people → 3. Length of a table unit (horseshoe): → 5 – 6 ≤ 10 – 12 seats at a spacing of 62.5 cm = 7.5 m. This length can be served by one waiter with prepared food. Tills on the way out, subsidiary rooms like toilets, staff rooms, services are situated in the basement.

- 1 Trays
- 2 Cold buffet
- 3 Drinks
- 4 Hot food
- 5 Cheese and dessert
- 6 Till
- 7 Fridge
- 8 Drinks cupboard
- 9 Ice
- 10 Warming compartment
- 11 Street sales



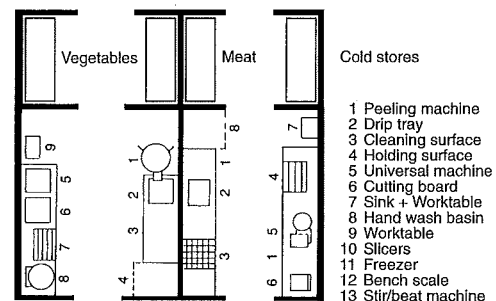
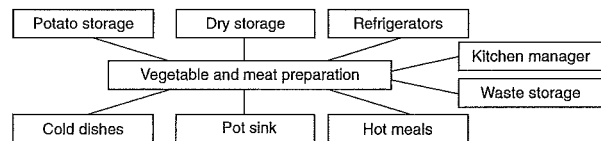
The diagram shows a building layout with the following rooms and connections:

- Rooms:** 19, 15, 8, 4a, 7, 6, 3, 5, 4, 17a, 11, Tea room, Restaurant, Terrace.
- Connections:**
 - Room 19 connects to 15.
 - Room 15 connects to 8.
 - Room 8 connects to 4a.
 - Room 4a connects to 7.
 - Room 7 connects to 6.
 - Room 6 connects to 3.
 - Room 3 connects to 5.
 - Room 5 connects to 4.
 - Room 4 connects to 17a.
 - Room 17a connects to 11.
 - Room 11 connects to the Terrace.
 - Room 19 connects to the Tea room.
 - Room 15 connects to the Restaurant.
 - Room 8 connects to the Restaurant.
 - Room 4a connects to the Restaurant.
 - Room 7 connects to the Restaurant.
 - Room 6 connects to the Restaurant.
 - Room 3 connects to the Restaurant.
 - Room 5 connects to the Restaurant.
 - Room 4 connects to the Restaurant.
 - Room 17a connects to the Restaurant.
 - Room 11 connects to the Restaurant.

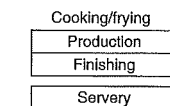
The diagram illustrates a complex maze layout. At the top, a subject (S) is positioned at an entrance. The maze consists of several interconnected paths and dead ends. Key areas are labeled with numbers: 1a, 2, 3, 3a, 4, 5, 6, 7, 8, 9, 10, and 11a. A central area is labeled 'cold store'. Arrows indicate the direction of movement through the maze, starting from the subject's position and navigating through the numbered sections.

- 1 waiters' walkway
- 1a service counter and cash tills
- 2 dishwasher
- 3 drinks bar with mixer, toaster,
ice cream freezer etc.
- 4 pastry preparation
- 4a pastry oven
- 5 sandwich preparation
- 6 reheating equipment (e.g. soup)
- 7 cooker rings
- 8 pot and pan washer
- 11 empties
- 15 linen store
- 17 deliveries and (a) store
- 19 staff toilets and cloakroom
- G1 toilets
- G2 telephone cubicle

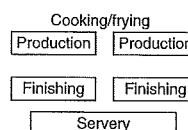
- 1 waiters' walkway
- 1a garden service counter
- 2 dish-washing area
- 3 drinks counter
- 3a drinks collar
- 4 pastry counter
- 5 cold dishes
- 6 hot dishes and sauces
- 6/7 table with hot store
- 8 pot and pan washer
- 9 vegetable preparation
- 10 meat preparation
- 11a deliveries, and access to stores, offices, staff cloakrooms and toilets
- 5 service accessories and tills



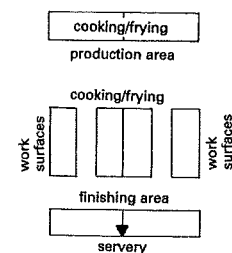
1. Work areas together without physical separation



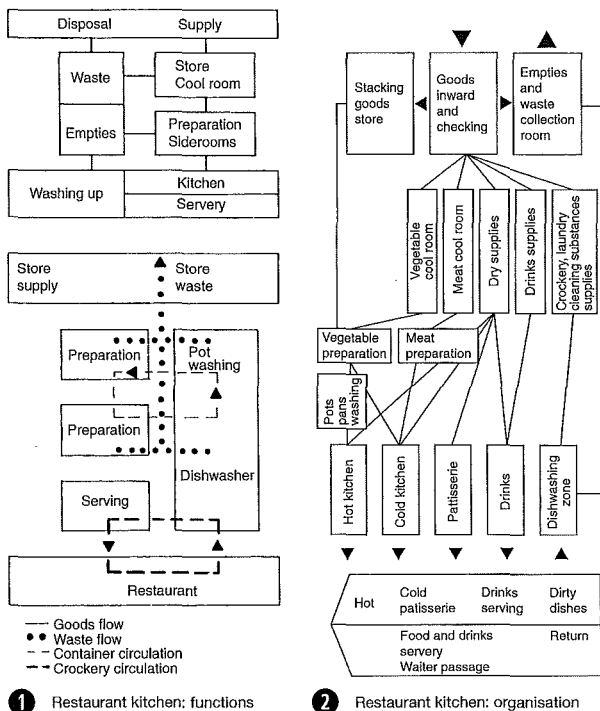
1. Work areas, production and manufacturing space, separately



7 American hotel kitchen system:
boiling and roasting areas arranged
parallel to the servier



Self-service restaurant → ⑤ suitable for department stores or attached to offices. Kitchen: no in-house production. Outside delivery and preparation using deep frozen process.



Bistros, snack bars, small cafés – or speciality restaurants with 40–60 seats – are classified as small operations. Small to medium units (70–100 places) require on the other hand carefully zoned and fully equipped kitchen facilities. Large businesses (service areas, fast food restaurants, large hotel kitchens) achieve considerably higher place numbers, often with an integrated eating bar or self-service areas.

Seats	80	120	200
goods inward	0.05–0.075	0.05–0.067	0.05–0.06
empties	0.05–0.075	0.05–0.067	0.05–0.06
waste/rubbish	0.05–0.075	0.03–0.050	0.03–0.04
delivery/disposal	0.15–0.225	0.13–0.183	0.13–0.16
cold room meat	0.05–0.075	0.05–0.067	0.04–0.05
cold room fruit and vegetables	0.05–0.075	0.05–0.067	0.04–0.05
cold room dairy products	fridge	0.03–0.05	0.03–0.05
cold room cold service	fridge	fridge	0.02–0.03
cool room drinks	fridge	fridge	0.05–0.07
freezer room	0.05–0.075	0.05–0.067	0.06–0.08
cooled goods delivery	0.15–0.225	0.183–0.25	0.24–0.32
store dry goods	0.15–0.175	0.117–0.13	0.09–0.1
store drinks	0.075–0.1	0.1–0.117	0.08–0.1
store non-food	0.075–0.1	0.067–0.083	0.07–0.08
cooled goods storage	0.3–0.375	0.283–0.33	0.24–0.28
vegetable preparation	0.075–0.1	0.067–0.083	0.04–0.05
meat preparation	0.075–0.1	0.05–0.067	0.04–0.05
fish/poultry preparation	0	0.03–0.05	0.03–0.04
hot kitchen	0.325–0.35	0.217–0.23	0.16–0.18
cold kitchen	0	0.05–0.067	0.04–0.05
patisserie	0	0	0.04–0.05
pot washing	0.05–0.075	0.05–0.067	0.03–0.04
office kitchen manager	0	0	0.03–0.04
kitchen facilities	0.525–0.625	0.47–0.567	0.41–0.5
dishwasher	0.1–0.125	0.1–0.117	0.09–0.1
service/waiter office	0.075–0.1	0.083–0.1	0.07–0.08
dishwasher/office	0.175–0.225	0.183–0.217	0.16–0.18
= Total	1.3–1.675	1.25–1.55	1.18–1.44

3 Kitchen areas: space required (m²/seat)

The trend away from conventional restaurants to those offering a wide range of food not only affects the planning and design of dining rooms, but also of kitchens. Small and medium-sized restaurant kitchens play a particular role here, and the following details are primarily based on this type of business.

Gastronorm system

The dimensions of containers, tables, shelves, devices, crockery and built-in units are all based on a 530 × 325 mm module → p. 181 **4**.

Function and organisation of the restaurant kitchen → **1** – **2**

The capacity of the kitchen is primarily dependent on the number of customer seats, customer expectations (type, extent and quality of the meals offered), the proportion of products freshly prepared from raw (in contrast to ready-prepared food) and the rate of customer turnover all day or at mealtimes (consumer frequency).

In fast food restaurants the rule of thumb for seat changes is about 1–3 times per hour, in conventional restaurants about 2. In speciality and evening-based restaurants, the guests stay on average for 1.3–2 hours.

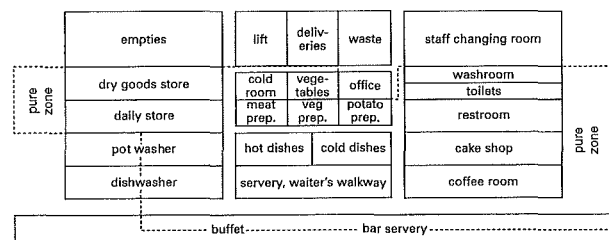
Percentage of total kitchen space requirement → **4**

Differentiated according to small, medium and large kitchens, floor area values for individual functions are based on → **3**.

Aisle widths in storage, preparation and production areas differ according to whether they are purely traffic routes or also overlap the service area. Working aisle widths should be 0.90–1.20 m, side traffic routes with (temporary) overlapping use 1.50–1.80 m and main traffic routes (transport and two-way through traffic) 2.10–3.30 m wide. For kitchen areas in small to medium restaurants, aisle widths of 1.00–1.50 m should be sufficient.

Area	Proportion (%)
goods delivery including inspection and waste storage	10
storage in freezer, cold and dry rooms	20
daily store	
vegetable and salad preparation area	2
cold dishes, desserts	8
patisseries/cakes	8
meat preparation	2
cooking area	8
washing area	10
traffic area	17
staff rooms and office	15
Total	100

4 Basis for dimensions and space requirements



5 Kitchen areas: classification and relationships of functional areas in clean and unclean zones (if earth-covered vegetables are prepared, this must take place in a separate part of the unclean area!)

Accommodation

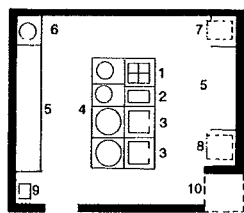
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Large kitchens
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BS EN 203
BS EN 631
BS 6173
BS EN 12851
BSEN ISO 22000
BIP 2130/2078
DIN EN 631
DIN 66075

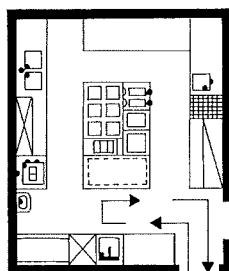
CATERING

Restaurant Kitchens

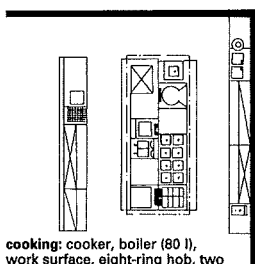


- 1 cooker
2 deep fat fryer
3 griddle
4 water boiler
5 work surface
6 cooker
7 double-deck oven
8 convectomat
9 hand basin
10 storage area

1 Basic organisation of the hot kitchen → 2 – 3

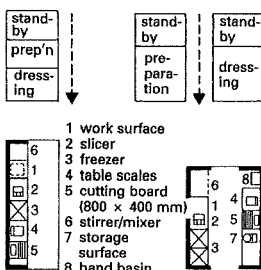


2 Kitchen for restaurant with 60–100 places

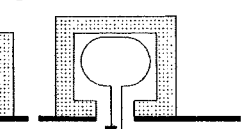


3 Kitchen for restaurant with 60–100 places

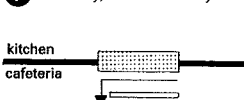
4 Restaurant kitchen for 150–200 meals



5 Functions and organisation of hot kitchen



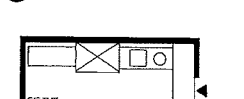
6 Organisation of cold kitchen



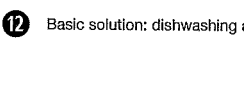
7 Servery, waiter walkway



8 Self-service restaurant



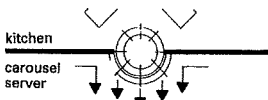
9 Self-service restaurant



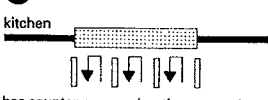
10 Free-flow restaurant



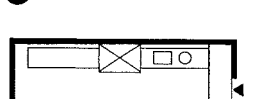
11 Basic solution: dishwashing area



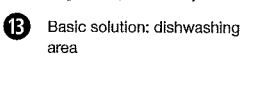
12 Basic solution: dishwashing area



13 Basic solution: dishwashing area



14 Basic solution: pot washing area



15 Functions and components of the dishwashing area

Hot kitchens, corresponding to their main functions – cooking and roasting – contain finishing zones and some or all of the following equipment: cooker (two to eight rings), increasingly mobile hotplates, extractor hood, water boiler, fast-cooking equipment, automatic cooker, steamer, automatic steamer and pressure cooker, combination device, water bath (bain-marie), baking and roasting oven, roast and grill plates, frying pans, staged roasting oven, chip pan, salamander, circulation machine (for frozen goods), microwave oven, continuous process automatic roaster and baker. Large automatic appliances are used only in very large kitchens. Storage and working surfaces should be located between appliances and at the end of the block. In addition to the fixed arrangement in the block, mobile appliances are increasingly being used, which can be adapted better to production changes and are easier to clean. → 1 – 5.

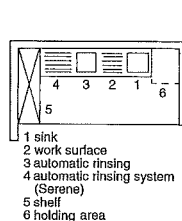
Cold kitchens should have a layout logically planned in parallel to the hot kitchen and be convenient for the (common) servery and bread area. The regular equipment is a day refrigerator under/over the cold table, various cutting and slicing machines (bread, cold cuts, meat, cheese), mixing machine, scales, cutting boards, salad table with lower cold cabinet, toaster or salamander, microwave oven and sufficient working and storage space → 6.

Servery for restaurant kitchens with counter or self-service, ideally situated between the preparation area and the dining room. There should be sufficient shelf space, a hot cabinet with heated plates and a cool zone for cold foods. Crockery shelves or upper fixings, cutlery container. In large businesses, also basket, plate and soup bowl dispensers.

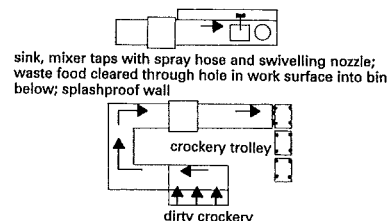
Crockery return: the difference between washing crockery and pots is considerable. With waiter service, the plates are brought back to their own area of the servery → 12 – 15. In addition to one or two sinks with drainers, storage space and shelves for pot washing, small kitchens naturally also require dishwashers in various sizes, feed types and operational types. Dishwashers under the worktop are usual, but also tunnel and rotary batch washers. Provide surfaces for the return (temporary storage, worktops, sorting, soaking) and space for the crockery → 12 – 14.

Staff area: about 10–15% of the total space required in a kitchen facility should be allocated for offices and staff rooms. The kitchen staff will need changing rooms, washing facilities and toilets. For more than 10 employees, a rest/break room is necessary (workplace regulations). It is important that changing and social rooms are near the kitchen, to avoid staff having to cross unclean room areas or corridors. For changing rooms, > 6 m² floor area, 4–6 air changes per hour and privacy. Provide each employee with a well-ventilated, lockable cupboard. In large operations, even differentiate street and working clothes. Guidelines for the toilets: per unit (WC and washbasin) 5–6 m² and for the shower areas (for more than five male or female employees) a washbasin and shower, approx. 5.5 m² per unit.

Ventilation and extraction: according to VDI guideline 2052, large kitchens should be equipped with mechanical air supply and extraction. Extract the air at each cooker and run it through ductwork into the open air. Supply fresh air (no recirculation). Take the heat production from the appliances into account (e.g. induction ovens can reduce the unused heating of the surroundings).



14 Basic solution: pot washing area



15 Functions and components of the dishwashing area

Accommodation

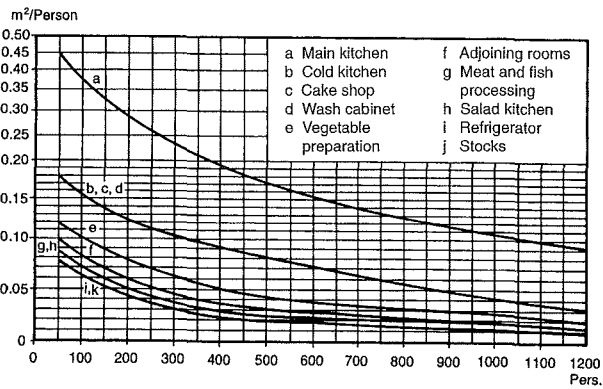
CATERING

- Restaurants
- Dining rooms
- Fast food outlets
- Restaurant kitchens
- Large kitchens
- Examples

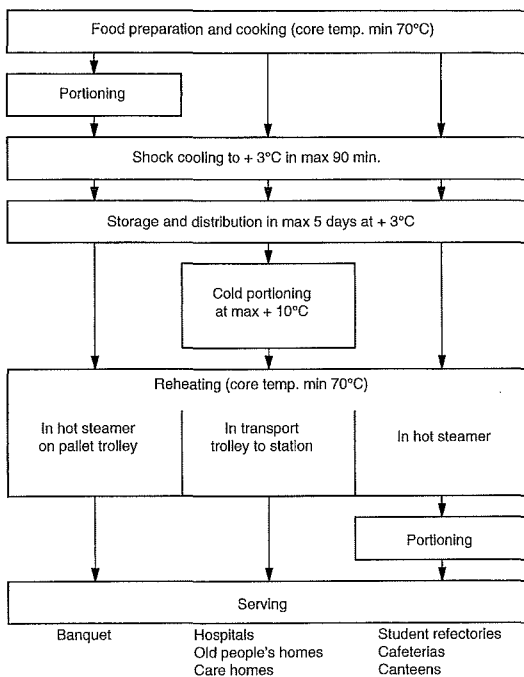
- BS EN 203
- BS EN 631
- BS 6173
- BS EN 12851
- BSEN ISO 22000
- BIP 2130/2078
- DIN EN 631
- DIN 66075

CATERING

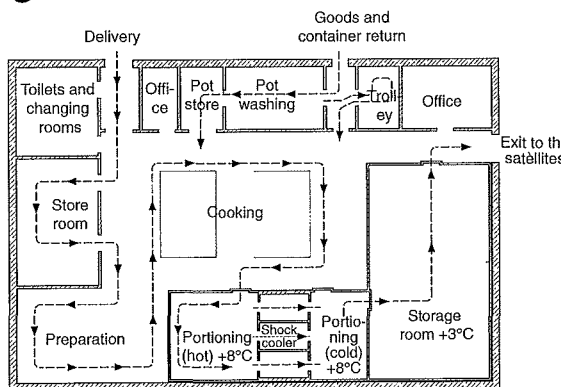
Large Kitchens



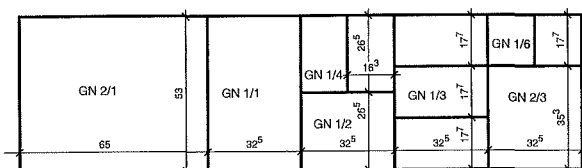
1 Space required for kitchen and utility rooms in restaurants and hotels. a-k = m² required per person in each room group



2 Cook chill portioning variants for various service requests



3 Schematic plan of cook chill kitchen with the product routes
Drawing: FDS Consulting H. Uelze



4 Container sizes in the Gastronorm system (GN)

With communal catering for many people in offices, hospitals and factories, a large number of meals have to be supplied in a short period of time. Under the conventional system, 'cook and serve', the kitchen has to be designed to cope with this peak demand, and the working times of the staff are also directly linked to the serving cycle. In order to employ staff and kitchens more regularly and effectively, 'cook and chill' has been developed → 2 – 3.

Under this system, the meals are prepared conventionally or purchased as convenience products, cooked in advance, quickly cooled and stored cool. The dishes are then completely cooked (finished) just before serving. This results in a separation of the production time and the serving time. The possibility of storing the prepared dishes enables the capacity of the kitchen to be increased considerably, with up to three times as many meals being produced as in a conventional large kitchen. The extra work involved in the production phase in cooking, cooling and rearming has to be balanced against the advantages of better utilisation of the kitchen and service.

The meals are prepared in a kitchen, which has a shock cooler in addition to the conventional cooking equipment. One of the most important factors involved with this system is the hygienic requirements in production (similar to industrial food production). The design must therefore implement an absolute separation of clean and unclean areas → p. 179 5.

Unclean areas

These are the goods reception, storerooms, preparation rooms, washing up area, waste disposal and cleaning agent store.

Clean areas

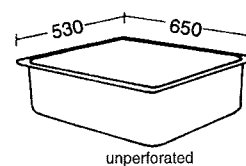
These are those for storage and preparation of pre-prepared products, food production, shock cooling, portioning and packaging, plus finishing cold rooms for ready-to-serve meals and the service counters.

When preparing the food, it is important to make sure that the core temperature is at least 70°C during cooking and that the subsequent cooling to +3°C takes place within 90 minutes.

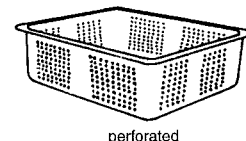
The food is also to be stored at +3°C. The **cold portioning** should take place at a temperature of +12°C and the transport to the consumer locations at max. +3°C. The cool chain from goods delivery to eating must never be interrupted. The statutory hygiene regulations are to be observed absolutely.

A recent innovation is the introduction of cook chill assembly kitchens. These are only portioning kitchens, which put together individual parts of meals. All food is produced by an external supplier as cook chill products. This results in the saving of a large part of the storage rooms and the whole of the cooking and roasting kitchens.

The planning should always be left to experienced designers, because additional details are important concerning hygiene for the kitchen employees.



unperforated



perforated

5 Transport and heating containers in Gastronorm sizes (GN)

Accommodation

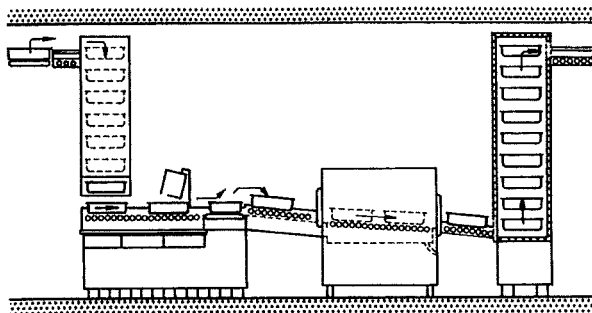
CATERING

Restaurants
Dining rooms
Fast food outlets
Restaurant
kitchens
Large kitchens
Examples

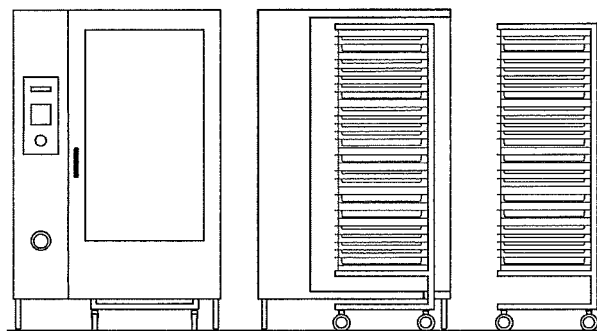
BS EN 203
BS EN 631
BS 6173
BS EN 12851
BS EN ISO 22000
BIP 2130/2078
DIN EN 631
DIN 66075

CATERING

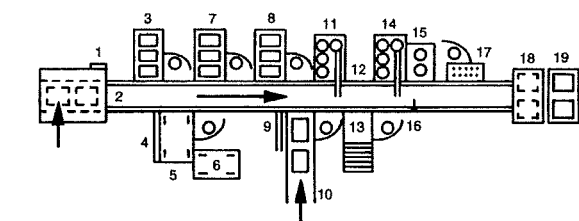
Large Kitchens



1 Container transport in the Contiport system

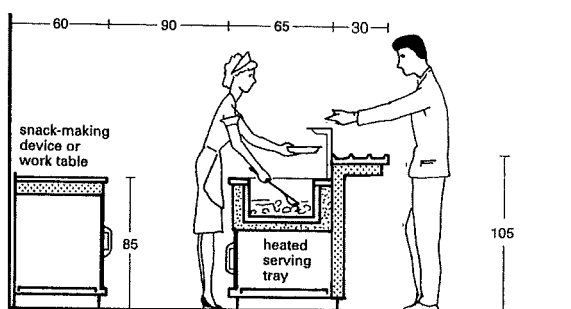


2 Combi steamer oven: foods are cooked or finished on trays



- | | | |
|---|--|---|
| 1 automatic crockery dispenser and tray unloader; dispensing from heated cabinet below; punched card reading device | 6 rack trolley for salads | 13 soup plate dispenser |
| 2 meal distribution conveyor | 7 electronically controlled serving trolley for vegetables | 14 automatic soup dispenser |
| 3 electronically controlled serving trolley for potatoes | 8 electronically controlled serving trolley for meat | 15 dispenser for heat-retaining container lids |
| 4 illuminated display for desserts and salads | 9 illuminated display for special diets | 16 automatic closing device for soup plate covers |
| 5 rack trolley for desserts | 10 supplementary conveyor for special diets | 17 control desk for diet assistant |
| | 11 automatic sauce dispenser | 18 automatic tray stacker |
| | 12 cutlery dispenser | 19 tray distribution trolley |

3 Food serving system



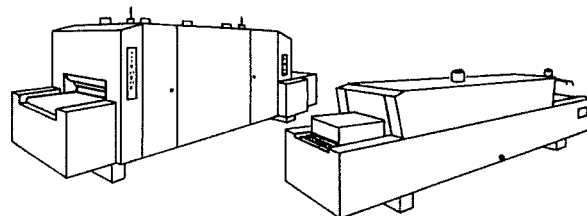
6 Food service, cafeteria

Container transport → 1 of unit containers in Gastronom sizes → p. 181 4. Automatic through-flow roasters and cookers → 4 – 5. Mainly used in industrial food production.

Combi steamer ovens enable the most varied modes of cooking in one appliance (hot air steaming, roasting and reheating. The core temperature of the food can be used for computer control of the cooking process). Heated by electricity or gas. Water supply needed. When cook and chill production takes place in the immediate vicinity of the cold portioning room or shock cooler, the cooler motor for the shock cooler should if possible be located in a side room (to prevent noise nuisance and heat production). The cold portioning is arranged between the shock cooling room and the cook chill storeroom. This is useful for the checking, portioning and assembly of the cooled foods.

In addition to the serving system with hot and cold counters → 3, 6 – 7, cook and chill production is also well suited for serving in front cooking systems.

In hospitals and residential/nursing homes, the serving is done on a portioning conveyor. The finishing of cook chill foods can then be carried out on special tray trolleys by induction, conduction or convection. According to the system used, special crockery may be required and/or space for the docking station in the ward. With all systems, it is possible to equip the trolley with cooling to ensure the unbroken cool chain for the cook chill system and also to keep cold foods like salads and desserts cool. Especially in large kitchens with long traffic routes, these systems can keep the food warm for a long time and avoid the core temperature dropping under the specified value.

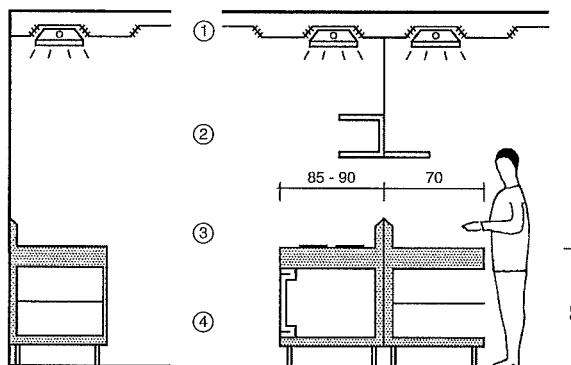


4 Automatic pass-through cooker



5 Automatic pass-through roaster

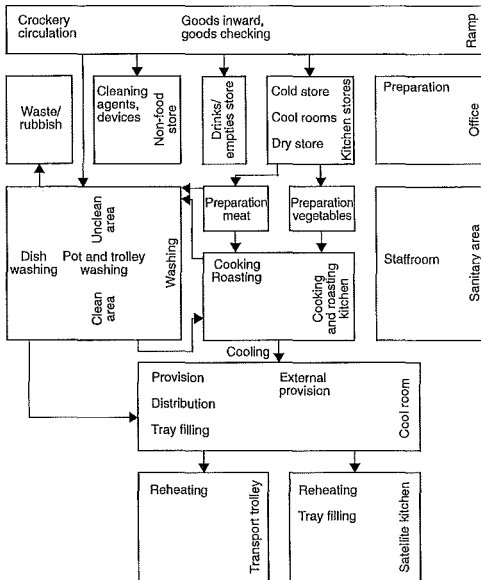
- 1 Ventilation ceiling
- 2 Shelves for casseroles and salamanders
- 3 Work surface/cooker
- 4 Floor unit with fridge/freezer, oven or cupboard



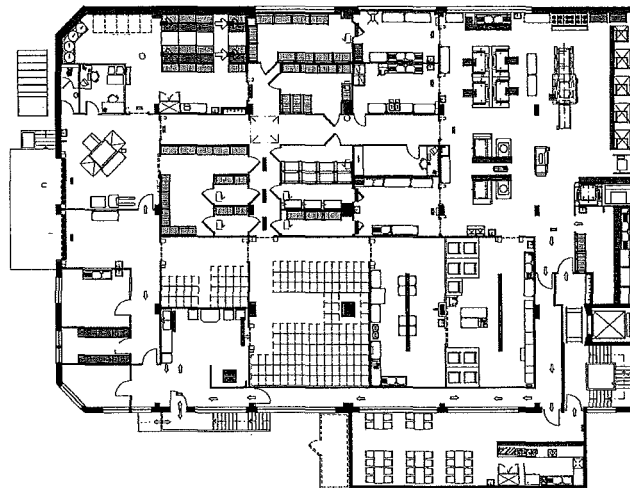
7 Section through working area

CATERING

Examples of Large Kitchens



1 Functional scheme of a cook chill kitchen



2 Large cook chill kitchen in Lisbon (1100 m²) for approx. 30 000 meals

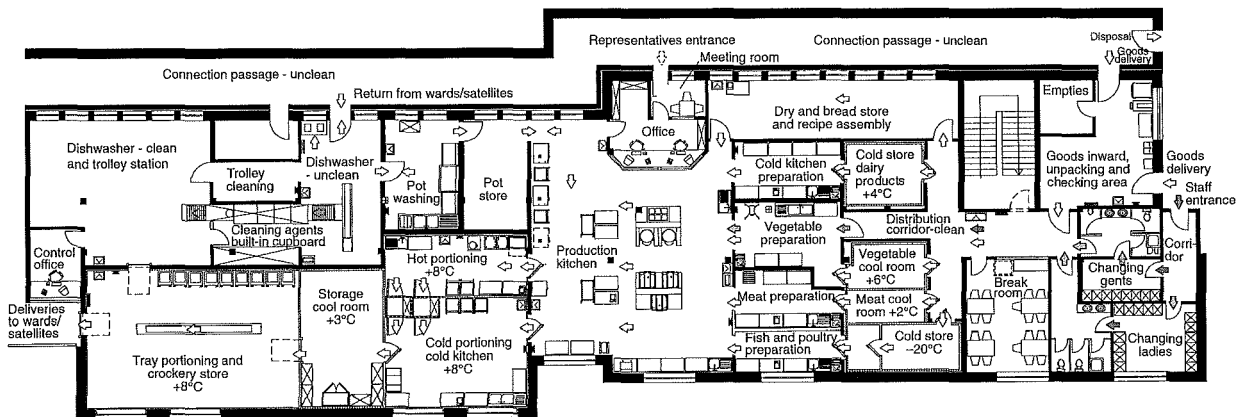
Designer: FDS Consulting H. Uelze

Accommodation

CATERING

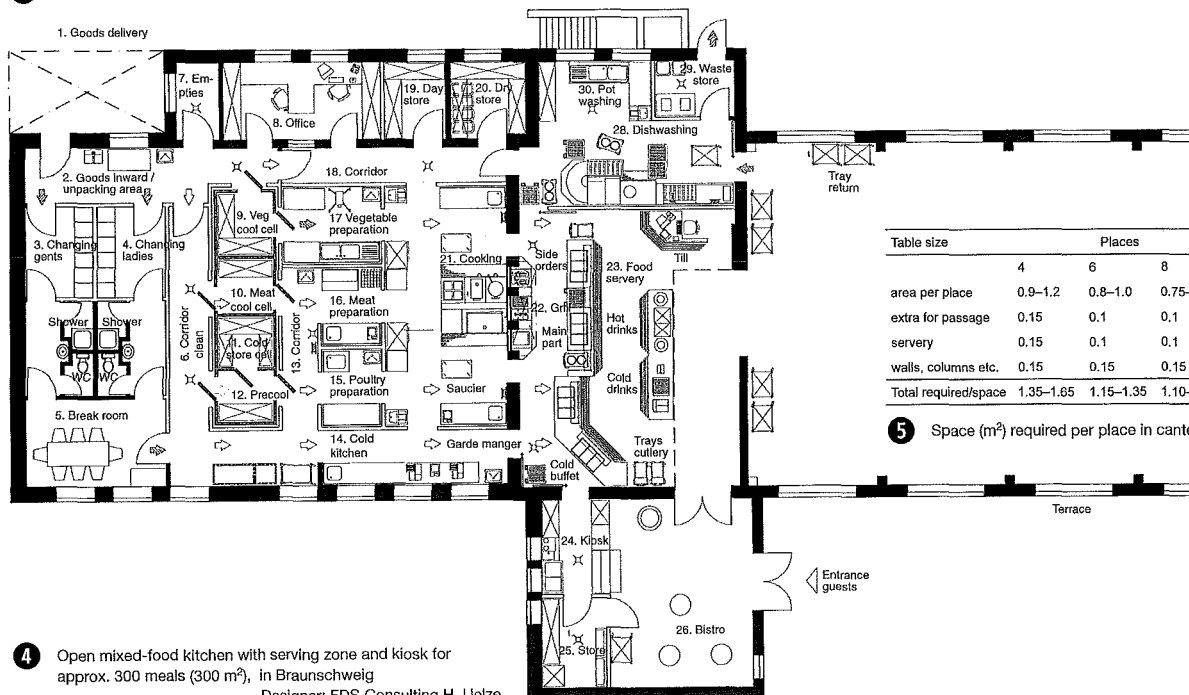
Restaurants
Dining rooms
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Examples

BS EN 203
BS EN 631
BS 6173
BS EN 12851
BSEN ISO 22000
BIP 2130/2078
DIN EN 631
DIN 66075



3 Cook chill kitchen in a hospital

Designer: FDS Consulting H. Uelze



4 Open mixed-food kitchen with serving zone and kiosk for approx. 300 meals (300 m²), in Braunschweig

Designer: FDS Consulting H. Uelze

Table size	Places		
	4	6	8
area per place	0.9–1.2	0.8–1.0	0.75–0.9
extra for passage	0.15	0.1	0.1
servery	0.15	0.1	0.1
walls, columns etc.	0.15	0.15	0.15
Total required/space	1.35–1.65	1.15–1.35	1.10–1.25

5 Space (m²) required per place in canteens

YOUTH HOSTELS

General design notes

Traditionally, youth hostels have offered reasonably priced accommodation for young people, youth groups and school classes, but the range of services of a modern youth hostel also includes meetings, courses, seminars, education of young people and adults, leisure facilities, school trips, and walking for singles and families. In rural areas, there are children's hostels (up to age 13) and youth hostels (13–17), and in towns there are youth guest houses offering tourist and cultural services. The tendency among youth hostels is towards the 3-star hotel standard → p. 172, with sizes of 120–160 beds.

Functional areas

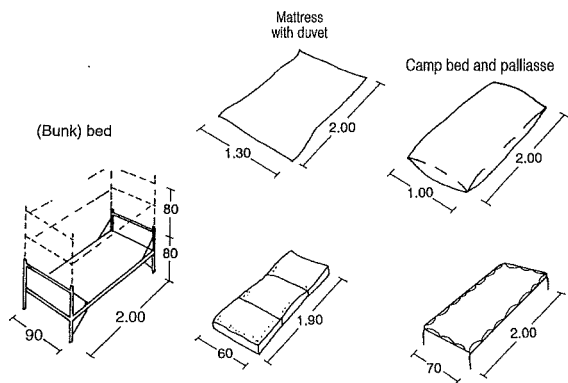
Bedrooms in hostels consist of 4–6 (maximum 8) rooms in groups with a leader room (one bed, one folding bed as day couch), and in guest houses 2–4 bedrooms, leader/teacher accommodation 1–2 rooms with work area, family rooms with 4–6 beds; the trend is to separate rooms for parents and children. Boys and girls are separated, mostly allocated rooms starting from the head of a corridor with a number of dividing doors, which can be locked if required (for flexibility). Showers and washbasins connected to the rooms, separate WC (accessible for disabled people), lockable luggage store. Cleaning rooms on each floor and shoe store/cleaning room.

Lounge and meeting rooms: One room per 20–25 beds. Multiple dining rooms, multi-purpose areas with individual corners, cafeteria, lecture room, dining room also suitable for events, same number of places as beds, entrance hall/reception and office for the warden. Outdoor camping area (door to sanitary facilities), sports and games, parking for buses and cars, garden for the warden. Inside, separated noise zones for table tennis, hobbies and workrooms.

Utility area: kitchen serving individual portions or group meals, serving trolleys, no self-service counter, utility room, staff lounge.

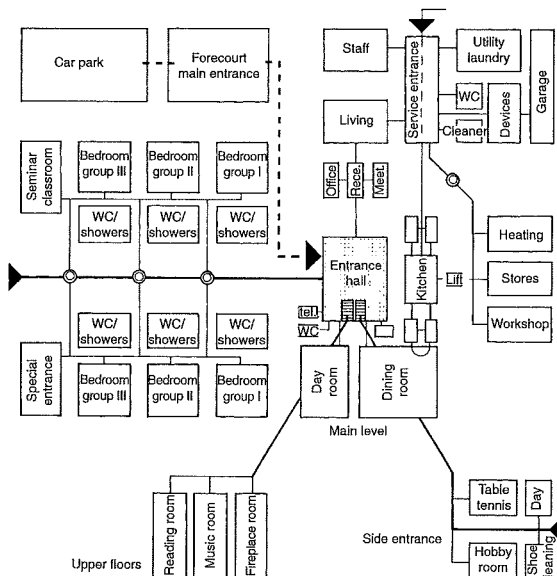
Living areas: flat for the warden, bedrooms for staff, 12–15 m².

UK issues: Youth hostels, for financial reasons and because they are frequently located in sensitive surroundings, are often conversions of existing buildings. Consequently the UK Youth Hostels Association (YHA) is reluctant to impose definitive architectural guidelines. However, some are applied, especially regarding fire safety and space per bed.

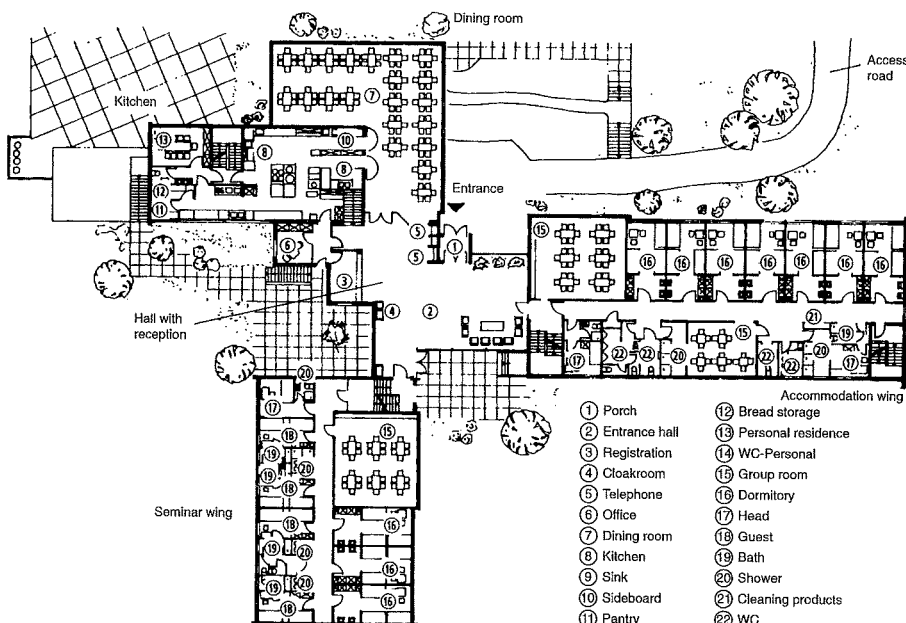


1 (Traditional) bedding in youth hostels

YOUTH
HOSTELS
MBO
Guidelines
German
Youth Hostel
Association



2 Youth hostel: functional scheme



3 Hiltzacker youth hostel

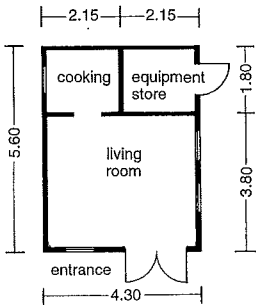
Arch.: C. Schönwald

HOLIDAY/WEEKEND HOMES

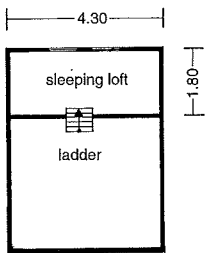
General Design Notes



1 Log cabin with sleeping loft



2 Ground floor → 1



3 First floor → 1

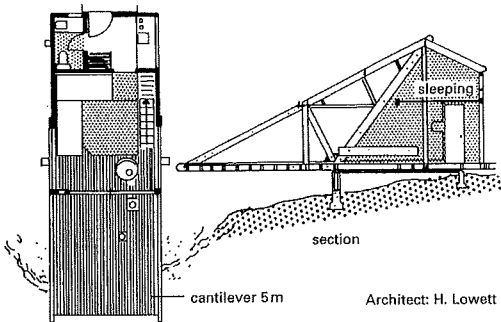
Holiday homes are for temporary holiday accommodation, either for the user or for (paying) guests. They can be single buildings on their own plot or grouped in a holiday park and are subject to the LBO.

Weekend homes, which make use of appropriate waivers under the LBO concerning the quality of residential rooms, thermal insulation, sound insulation and fire protection, may be erected only on suitable sites and are restricted to certain sizes laid down in the States' Camping and Weekend Home Regulations (e.g. floor area max. 40 m² (+ 10 m² veranda), height max. 3.50 m). The features of rented holiday homes are often controlled by the **German Tourism Association**, which issues classifications. In general, weekend homes should have a living area, a proper kitchen (partitioned), an enclosed shower, with WC and washbasin, and at least one enclosed sleeping area.

Accommodation

HOLIDAY/
WEEKEND
HOMES

LBO
States'
Camping and
Weekend Home
Regulations
German Tourism
Association



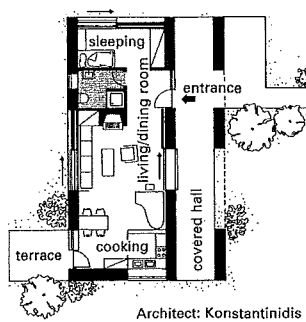
4 Weekend home for four people with 25 m² living area

Arch. H. Lowett



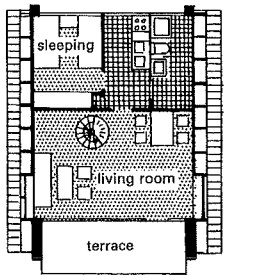
5 Holiday home in Belgium

Architect: Prof. Cosse



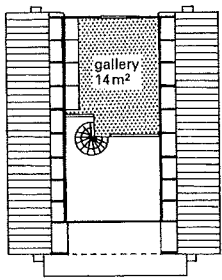
6 Holiday cabin in Greece

Architect: Konstantinidis



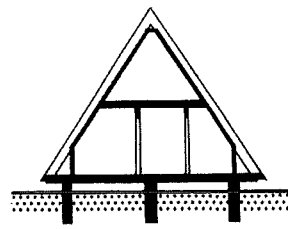
7 Weekend home

Architects: Immich/Erdenich

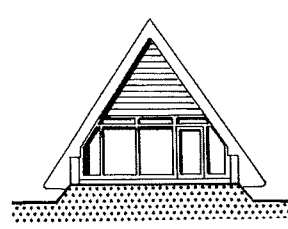


8 Balcony → 7

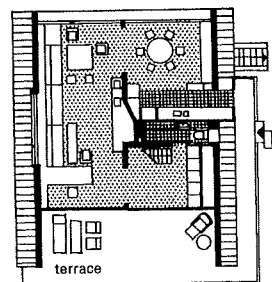
Architect: Hagen



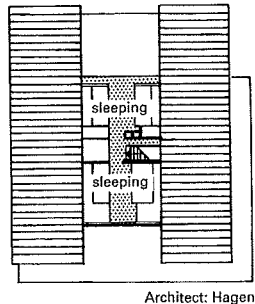
9 Section → 7



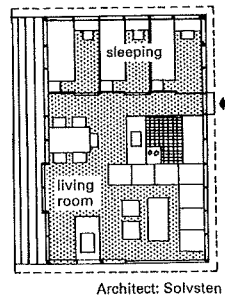
10 Elevation → 7



11 Ground floor of a holiday home in Nordseeländ

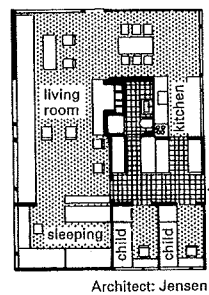


12 First floor → 11



13 Weekend home

Architect: Solvsten



14 Holiday home on Bornholm

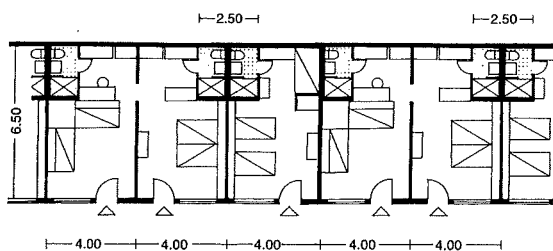
Architect: Jensen

MOTELS

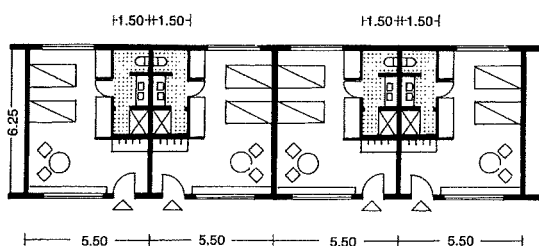
General Design Notes

Motels offer reasonably priced accommodation for travellers. They are located at the edge of towns in places easily reachable by motorway or arterial roads, near tourist attractions and holiday regions. It is beneficial to have restaurants, petrol stations and services for motorists in the immediate vicinity. In contrast to city hotels, motels are mostly single-storey, widely spread facilities → 7. The access road normally leads to the registration (short-term parking), then to a car park or carport as near to the room as possible. (Departure also via registration with check-out and return of key.)

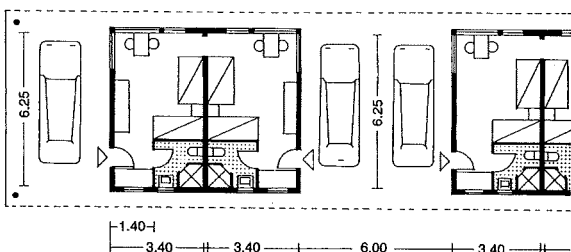
Room sizes $4 \times 4 \text{ m} - 5 \times 5 \text{ m}$, with bathroom and sometimes kitchenette → 1 – 6. Furnishing is cost-saving and simple (most of the guests stay only one night). Community rooms for guests, with desks and reading tables, radio, television; play area should be situated away from the guest rooms so as not to disturb sleepers.



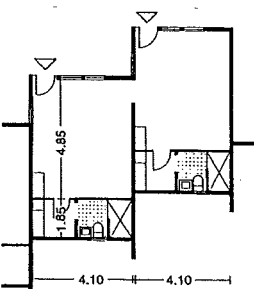
1 Room units, lit one side, with furnishing variants Arch.: Polivnick



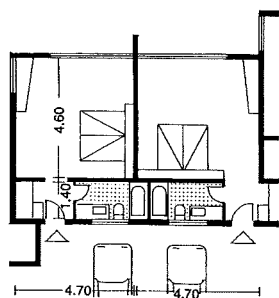
2 Room units, exposed two sides Arch.: Roberto



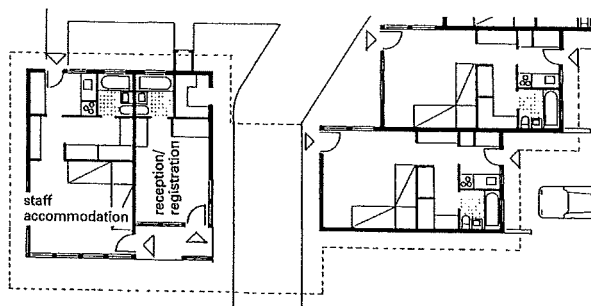
3 Group of six room units with covered parking places Arch.: Duncan



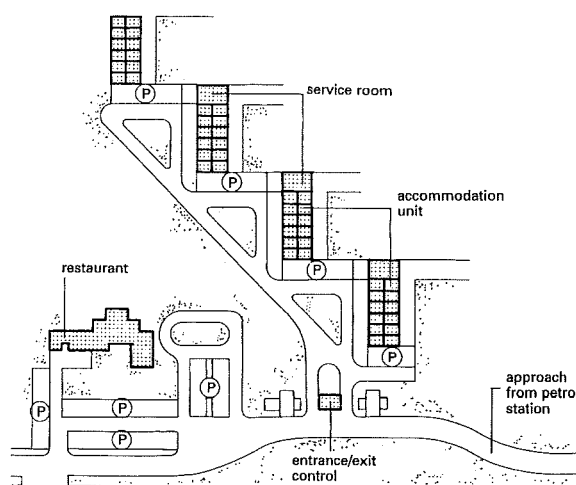
4 Stepped arrangement Arch.: Thompson



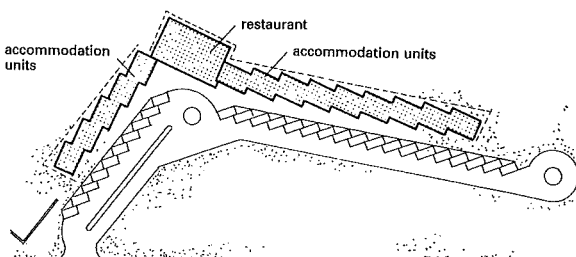
6 Stepped arrangement Arch.: Hornbostel



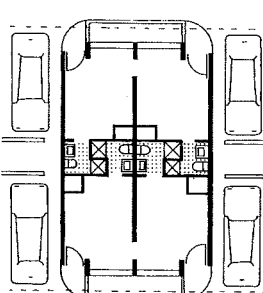
5 Stepped arrangement of room units with registration and manager's flat Arch.: Williams



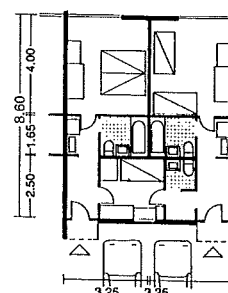
7 Motel facility with joint car park for each building and restaurant as separate business Arch.: Fried



8 Layout plan for → 5 with restaurant Arch.: Hornbostel



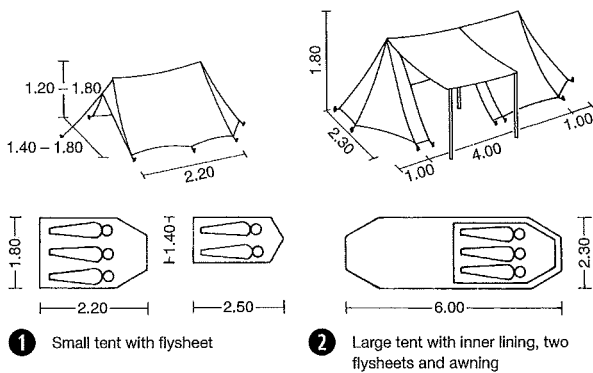
9 Four room units as block Arch.: Tibbals, Crumley, Musson



10 Two room units with optional additional room

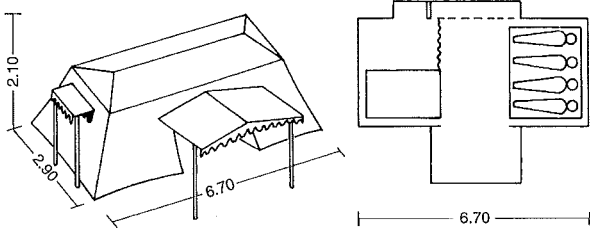
CAMPING

General Design Notes

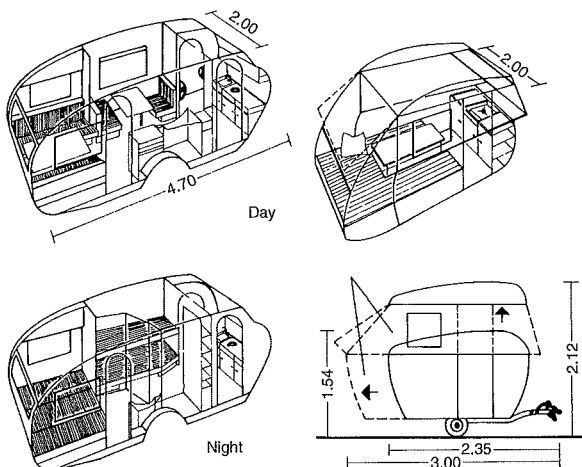


1 Small tent with flysheet

2 Large tent with inner lining, two flysheets and awning

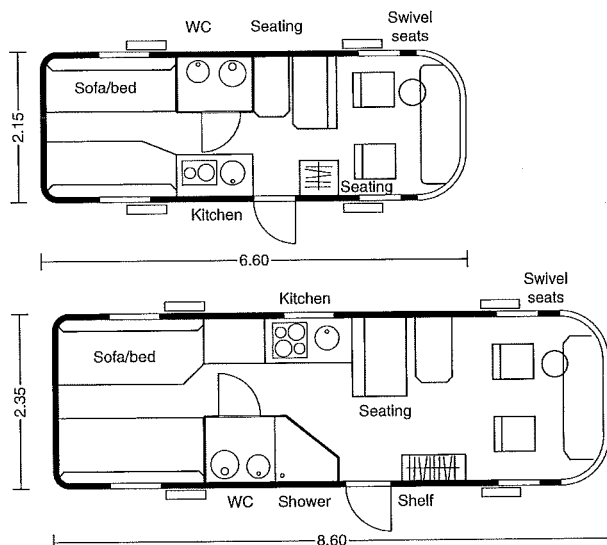


3 Large house tent with high side-walls, inner linings, awning, windows



4 Caravan with cooking, seating, sleeping and luggage compartments

5 Folding caravan with cooking, seating, sleeping and luggage compartments

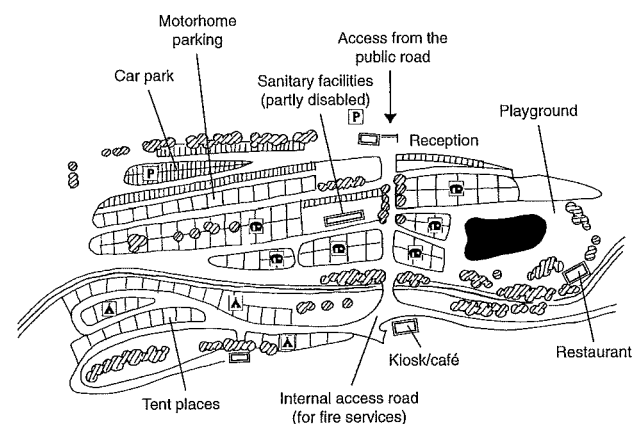


6 Motorhome with seating, swivelling chairs, sofa/bed and WC

Camping sites → 7 offer the cheapest legal accommodation – in tents → 1 – 3, or caravans → 4 – 5 or motorhomes → 6. The spectrum ranges from **natural camping sites** in holiday areas, mostly in attractive countryside (e.g. on the coast) to **motorhome parks**, as a cheap alternative to hotels and motels, in reachable locations near towns (they are mainly for motorhomes).

The requirements for camping sites are laid down in the states' **Camping and Weekend Parks Regulations**. Camping sites generally need to have an access road from a public road, with access control (barrier), reception and assignment of places, an area for waiting vehicles, visitor's car parks and internal access with roads adequate for fire service vehicles (width min. 3.0 m).

Camping sites and motorhome parks should be separated. A place should be provided for each caravan or motorhome. These places are min. 75 m² (65 m² if car parking spaces are provided separately) and are grouped into sections of 20 places by fire roads (5 m wide). It may be necessary to provide firebreak strips next to the boundaries.



7 Example of a camping site with tent area and places for caravans

Communal facilities

Camping sites have the following communal facilities:

- **drinking water taps** (one tap for every 20 places supplied from the public water main), **electricity sockets** (parking places for motorhomes and larger caravans should ideally have water supply, drains and electricity supply), **fire hydrants** and **fire extinguishers** (one fire extinguisher per 40 places)
- sanitary facilities with: **toilet blocks** (guideline: 1 block per 100 places with: 4 WCs/2 urinals/1 washbasin (gents'), 6 WC/1 washbasin (ladies'), 1 WC for the disabled), **washing facilities** (guideline for each 100 places: 3 showers, 5 washbasins for gents and ladies, 1 shower and washroom for the disabled), sink for washing crockery and clothes, **emptying facility for waste water and toilets**, sufficient and appropriately distributed waste bins
- **telephone** line with emergency call function, **kiosk**, **supermarket**, **snack bar** or **restaurant**, **leisure facilities** (play area, sports grounds, barbecue site, open area).

Accommodation

CAMPING

MBO
States'
Camping and
Weekend Parks
Regulations