E 04 B GENERAL BUILDING CONSTRUCTIONS; WALLS, e.g. PARTITIONS; ROOFS; FLOORS; CEILINGS; INSULATION OR OTHER PROTECTION OF BUILDINGS (border constructions of openings in walls, floors, or ceilings E 06 B 1/00)

Notes

(1) This subclass covers working methods used in constructing new buildings and analogous working methods on existing buildings. Other working methods on existing buildings, except those for insulating, are classified in group E 04 G 23/00. **[5]**

(2) In this subclass, the following term is used with the meaning indicated:
– "ceiling" includes all the finishing material concealing the underside of the load-carrying ceiling structure or roof structure. **[4]**

(3) In this subclass, it is desirable to add the indexing code of group 101:00. The indexing code should be unlinked. **[5]**

1/00 Constructions in general; Structures which are not restricted either to walls, e.g. partitions, or floors or ceilings or roofs (scaffolds, shutterings E 04 G; structures specially adapted for buildings for special purposes, general layout of buildings, e.g. modular co-ordination, E 04 H; the particular parts of buildings, see the relevant groups for those parts)

1/02 . Structures consisting primarily of load-supporting, block-shaped or slab-shaped elements (1/32 to 1/36 take precedence)

1/04 . . the elements consisting of concrete, e.g. reinforced concrete, or other stone-like material

1/06 . . . the elements being prestressed

1/08 . . the elements consisting of metal

1/10 . . the elements consisting of wood

1/12 . . the elements consisting of other material

1/14 . . the elements being composed of two or more materials (of reinforced concrete 1/04)

1/16 . Structures made from masses, e.g. concrete, cast or similarly formed in situ with or without making use of additional elements, such as permanent forms, sub-structures to be coated with load-bearing material (1/32 to 1/36 take precedence)

1/18 . Structures comprising elongated load-supporting parts, e.g. columns, girders, skeletons (1/32 to 1/36 take precedence; elongated load-supporting parts as elements, trusses, truss-like structures E 04 C 3/00)

1/19 . . Three-dimensional framework structures **[2]**

Note

Group 1/19 takes precedence over groups 1/20 to 1/30. **[2]**

1/20 . . the supporting parts consisting of concrete, e.g. reinforced concrete, or other stone-like material

1/21 . . . Connections specially adapted therefor **[2]**

1/22 . . . with parts being prestressed

1/24 . . the supporting parts consisting of metal

1/26 . . the supporting parts consisting of wood

1/28 . . the supporting parts consisting of other material

1/30 . . the supporting parts being composed of two or more materials; Composite steel and concrete constructions (of reinforced concrete 1/20)

1/32 . Arched structures; Vaulted structures; Folded structures (vaulted roofs 7/08)

1/34 . Extraordinary structures, e.g. with suspended or cantilever parts supported by masts or tower-like structures enclosing elevators or stairs; Features relating to the elastic stability (1/342, 1/343, 1/348 take precedence; for floors 5/43; buildings for special purposes, e.g. withstanding earthquake, E 04 H)

1/342 . Structures covering a large free area, whether open-sided or not, e.g. hangars, halls (roof trusses E 04 C 3/00; non-structural features for specified purposes, see the relevant groups of E 04 H)

1/343 . Structures characterised by movable, separable, or collapsible parts, e.g. for transport (movable roof parts 7/16; floatable buildings B 63 B; small prefabricated buildings, transportable as a whole, E 04 H 1/12; small garages E 04 H 6/02; tents or canopies, in general E 04 H 15/00)

1/344 . . with hinged parts

1/346 . . Rotary buildings; Buildings with rotary units, e.g. rooms

1/348 . Structures composed of units comprising at least considerable parts of two sides of a room, e.g. box-like or cell-like units closed or in skeleton form (wall units locating conduits or the like E 04 C 2/52)

1/35 . Extraordinary methods of construction, e.g. lift-slab, jack-block (1/34 takes precedence; falsework, shuttering for shaping walls, floors, ceilings or roofs for structures of particular shape in situ E 04 G 11/04; conveying or assembling of building materials E 04 G 21/00; working measures on existing buildings E 04 G 23/00)

1/36 . Bearings or like supports allowing movement (for bridges E 01 D 19/04; buildings withstanding earthquake E 04 H 9/02)

1/38 . Connections for building structures in general

Note

Connections specially adapted for particular building parts or for particular building structures are classified in the groups for those parts or structures, e.g. in groups 1/21, 2/00, 5/00, 7/00 or 9/00. Joints not specially adapted for building construction, or of more general application, are classified in the appropriate subclasses, e.g. F 16 B. **[5]**

1/41 . . Connecting devices specially adapted for embedding in concrete or masonry (spacers for cavity walls 2/30, 2/44; connectors for reinforcing elements E 04 C 5/16; fastening frames to the border of openings E 06 B 1/56)

1/48 . . Dowels, i.e. members adapted to penetrate the surfaces of two parts and to take the shear stresses

1/49 . . . with self-penetrating parts, e.g. claw dowels

1/58 . . of bar-shaped building elements

1/61 . . of slab-shaped building elements with each other **[5]**

1/62 . Insulation or other protection; Elements or use of specified material therefor (chemical compositions C 01 to C 11; implements for applying insulation or sealings E 04 F 21/00; buildings to withstand, or to provide protection against, external undesired influences E 04 H 9/00; sealing pipes in walls or partitions F 16 L 5/02; shielding against dangerous radiation G 21 F; constructions of particular parts of buildings, see the relevant groups for those parts)

1/64 . . for making damp-proof; Protection against corrosion (sealings 1/66)

1/66 . . Sealings (additions of anti-leak properties to plaster C 04 B; bituminous sealing masses C 08 L 95/00; sealings for hydraulic engineering work in general E 02 B 3/16; against ground humidity or ground water E 02 D 31/02; coverings against rain or other precipitations of the atmosphere E 04 D; composition of material or manufacture of sealing foils, see the relevant classes for these foils)

1/68 . . . of joints, e.g. expansion joints (packing for joints in roads or airfields E 01 C 11/02; expansion joints for bridges E 01 D 19/06; sealing joints between foundation piles E 02 D 5/14; joints in foundation structures E 02 D 29/16; devices for sealing the spaces or joints between roof-covering elements E 04 D 1/36; sealing joints between roof-covering elements E 04 D 3/38; construction of joints for flooring or floor layers made of masses in situ E 04 F 15/14)

1/682 . . . . formed in situ **[5]**

1/684 . . . . using preformed elastomeric elements **[5]**

1/686 . . . . . comprising a plurality of hollow, deformable internal cells **[5]**

1/70 . . Drying or keeping dry, e.g. by air vents (by sealings 1/66; during erection E 04 G 21/28)

1/72 . . Pest control (by keeping dry 1/70; impregnation of wood or like materials B 27 K)

1/74 . . Heat, sound or noise insulation, absorption, or reflection (forms of, or arrangements in, rooms for influencing or directing sound 1/99); Other building methods affording favourable thermal or acoustical conditions, e.g. accumulating of heat within walls (fire protection 1/94; elements chiefly adapted for structural purposes E 04 C 1/00 to 3/00; chiefly adapted for surface coverings E 04 F 13/00; as underlayers for floor coverings E 04 F 15/18; closures for wall or like openings E 06 B)

1/76 . . . specifically with respect to heat only (heat insulation in general F 16 L 59/00)

1/78 . . . . Heat insulating elements

1/80 . . . . . slab-shaped

1/82 . . . specifically with respect to sound only (noise damping in ducts or channels E 04 F 17/00; noise damping in general G 10 K 11/16)

1/84 . . . . Sound-absorbing elements

1/86 . . . . . slab-shaped

1/88 . . . Insulating elements for both heat and sound

1/90 . . . . slab-shaped

1/92 . . Protection against other undesired influences or dangers (buildings providing protection against external dangers E 04 H 9/00; shielding against dangerous radiation G 21 F)

1/94 . . . against fire (fire-fighting A 62 C; impregnation of wood or similar materials B 27 K; fireproof doors E 06 B 5/16)

1/98 . . . against vibrations or shocks (on foundations E 02 D 31/08); against mechanical destruction, e.g. by air-raids (against incendiary damage only 1/94; finishing work therefor E 04 F; buildings withstanding earthquake or the like, shelters, arrangements of splinter-catching walls E 04 H 9/00)

1/99 . Room acoustics, i.e. forms of, or arrangements in, rooms for influencing or directing sound (1/82 takes precedence; acoustics in general G 10 K 11/00; electric signal processing for producing a reverberation or echo sound G 10 K 15/08)

2/00 Walls, e.g. partitions, for buildings; Wall construction with regard to insulation; Connections specially adapted to walls (connections for building structures in general 1/38; insulation for building in general 1/62; building elements of relatively thin form for parts of buildings E 04 C 2/00)

2/02 . built-up from layers of building elements

2/04 . . Walls having neither cavities between, nor in, the solid elements

2/06 . . . using elements having specially-designed means for stabilising the position

2/08 . . . . by interlocking of projections or inserts with indentations, e.g. of tongues, grooves, dovetails

2/10 . . . . by filling material with or without reinforcements in small channels in, or in grooves between, the elements

2/12 . . . using elements having a general shape differing from that of a parallelepiped

2/14 . . Walls having cavities in, but not between, the elements, i.e. each cavity being enclosed by at least four sides forming part of one single element

2/16 . . . using elements having specially designed means for stabilising the position

2/18 . . . . by interlocking of projections or inserts with indentations, e.g. of tongues, grooves, dovetails

2/20 . . . . by filling material with or without reinforcements in small channels in, or in grooves between, the elements

2/22 . . . using elements having a general shape differing from that of a parallelepiped

2/24 . . . the walls being characterised by fillings in some of the cavities forming load-bearing pillars or beams

2/26 . . . the walls being characterised by fillings in all cavities in order to form a wall construction

2/28 . . Walls having cavities between, but not in, the elements; Walls of elements each consisting of two or more parts kept in distance by means of spacers, all parts being solid

2/30 . . . using elements having specially designed means for stabilising the position; Spacers for cavity walls

2/32 . . . . by interlocking of projections or inserts with indentations, e.g. of tongues, grooves, dovetails

2/34 . . . . by filling material with or without reinforcements in small channels in, or in grooves between, the elements

2/36 . . . using elements having a general shape differing from that of a parallelepiped

2/38 . . . the walls being characterised by fillings in some of the cavities forming load-bearing pillars or beams

2/40 . . . the walls being characterised by fillings in all cavities in order to form a wall construction
2/42 . . Walls having cavities between, as well as in, the elements; Walls of elements each consisting of two or more parts, kept in distance by means of spacers, at least one of the parts having cavities
2/44 . . . using elements having specially designed means for stabilising the position; Spacers for cavity walls
2/46 . . . . by interlocking of projections or inserts with indentations, e.g. of tongues, grooves, dovetails
2/48 . . . . by filling material with or without reinforcements in small channels in, or in grooves between, the elements
2/50 . . . using elements having a general shape differing from that of a parallelepiped
2/52 . . . the walls being characterised by fillings in some of the cavities forming load-bearing pillars or beams
2/54 . . . the walls being characterised by fillings in all cavities in order to form a wall construction
2/56 . Walls of framework or pillarwork; Walls incorporating load-bearing elongated members (2/74, 2/88 take precedence; pillars E 04 C 3/30)
2/58 . . with elongated members of metal
2/60 . . . characterised by special cross-section of the elongated members
2/62 . . . . the members being formed of two or more elements in side-by-side relationship
2/64 . . with elongated members of concrete
2/66 . . . characterised by special cross-section of the elongated members
2/68 . . . made by filling-up wall cavities (2/24, 2/38, 2/52 take precedence)
2/70 . . with elongated members of wood
2/72 . Walls of elements of relatively thin form (2/56, 2/74, 2/88 take precedence; with joint fillings acting as framework or pillars 2/68; elements E 04 C 2/00)
2/74 . Removable non-load-bearing partitions; Partitions with a free upper edge (framed panels E 04 C 2/38)
2/76 . . with framework or posts of metal
2/78 . . . characterised by special cross-section of the frame members
2/80 . . with framework or posts of wood
2/82 . . characterised by the manner in which edges are connected to the building; Means therefor; Special details of easily-removable partitions
2/84 . Walls made by casting, pouring, or tamping in situ (2/02, 2/56 take precedence; forms therefor E 04 G 11/06; working of concrete or similar masses able to be cast or poured in situ E 04 G 21/02)
2/86 . . made in permanent forms
2/88 . Curtain walls
2/90 . . comprising panels directly attached to the structure **[4]**
2/92 . . . Sandwich-type panels **[4]**
2/94 . . . Concrete panels (2/92 takes precedence) **[4]**
2/96 . . comprising panels attached to the structure through mullions or transoms **[4]**

5/00 Floors; Floor construction with regard to insulation; Connections specially adapted therefor (elements for floors, e.g. bricks, stones, filling bodies, girders, E 04 C; flooring as finishing work, insulation of flooring, sectional false floors, e.g. for computers, E 04 F 15/00) **[5]**

5/02 . Load-carrying floor structures formed substantially of prefabricated units (5/43 to 5/48 take precedence)
5/04 . . with beams of concrete or other stone-like material, e.g. asbestos cement (5/08, 5/14 take precedence)
5/06 . . . placed against one another
5/08 . . assembled of block-shaped elements, e.g. hollow stones (5/14 takes precedence; floors composed of reinforced brickwork 5/44)
5/10 . . with metal beams or girders, e.g. with steel lattice girders (5/14 takes precedence)
5/12 . . with wooden beams (5/14 takes precedence)
5/14 . . with beams or girders laid in two directions
5/16 . Load-carrying floor structures wholly or partly cast or similarly formed in situ (5/43 to 5/48 take precedence; floors merely characterised by the prefabricated elements E 04 C)
5/17 . . Floor structures partly formed in situ
5/18 . . . with stiffening ribs or other beam-like formations wholly cast between filling members
5/19 . . . . the filling members acting as self-supporting permanent forms (5/21 takes precedence)
5/21 . . . . Cross-ribbed floors
5/23 . . . with stiffening ribs or other beam-like formations wholly or partly prefabricated (with all load-carrying parts substantially consisting of prefabricated units 5/02)
5/26 . . . . with filling members between the beams (5/28 takes precedence)
5/28 . . . . Cross-ribbed floors
5/29 . . . . the prefabricated parts of the beams consisting wholly of metal (5/28 takes precedence)
5/32 . . Floor structures wholly cast in situ with or without form units or reinforcements
5/36 . . . with form units as part of the floor
5/38 . . . . with slab-shaped form units acting simultaneously as reinforcement; Form slabs with reinforcements extending laterally outside the element
5/40 . . . . . with metal form slabs
5/43 . Floor structures of extraordinary design; Features relating to the elastic stability; Floor structures specially designed for resting on columns only, e.g. mushroom floors (extraordinary constructions in general 1/34)
5/44 . Floors composed of stones, mortar, and reinforcing elements (with inserts of glass 5/46)
5/46 . Special adaptation of floors for transmission of light, e.g. by inserts of glass (of ceilings 9/32; block-shaped elements E 04 C 1/42; slab- or sheet-shaped elements E 04 C 2/54; for roof covering E 04 D 3/06) **[5]**
5/48 . Special adaptations of floors for incorporating ducts, e.g. for heating or ventilating (in block-shaped elements E 04 C 1/39; in slab- or sheet-shaped elements E 04 C 2/52)

7/00 **Roofs; Roof construction with regard to insulation** (structures for roofs as well as for floors 5/00; ceilings 9/00; greenhouses A 01 G 9/14; large containers having floating covers B 65 D 88/34; roof trusses, truss-like structures, joists E 04 C 3/02; roof coverings E 04 D) **[5]**

7/02 . with plane sloping surfaces, e.g. saddle roofs (7/12 takes precedence)

7/04 . . supported by horizontal beams or the equivalent resting on the walls (7/06 takes precedence)

7/06 . . Constructions of roof intersections or hopped ends

7/08 . Vaulted roofs (7/14 takes precedence; vaulted structures in general 1/32; inflatable tents or canopies, in general E 04 H 15/20; inflatable forms for shaping in situ E 04 G 11/04)

7/10 . . Shell structures, e.g. of hyperbolic-parabolic shape; Grid-like formations acting as shell structures; Folded structures

7/12 . formed in bays, e.g. sawtooth roofs (7/10 takes precedence)

7/14 . Suspended roofs (suspended tents or canopies, in general E 04 H 15/04)

7/16 . Roof structures with movable roof parts (buildings for special purposes E 04 H)

7/18 . Special structures in or on roofs, e.g. dormer windows (in connection with roof coverings E 04 D 13/00, especially domes 13/03)

7/20 . Roofs consisting of self-supporting slabs, e.g. able to be loaded **[5]**

7/22 . . the slabs having insulating properties, e.g. being laminated with layers of insulating material (7/24 takes precedence) **[6]**

7/24 . . the slabs being collapsible, e.g. for transport **[6]**

9/00 **Ceilings; Construction of ceilings, e.g. false ceilings; Ceiling construction with regard to insulation** (ceilings used as forms for making floors 5/00; coverings or linings for ceilings E 04 F 13/00) **[5]**

9/02 . having means for ventilation or vapour discharge **[5]**

9/04 . comprising slabs, sheets or the like (9/06 to 9/34 take precedence; slabs, sheets or the like per se E 04 C 2/00) **[5]**

Note

In this group, it is desirable to add the indexing codes of group 103:00. The indexing codes should be unlinked. **[5]**

9/06 . characterised by constructional features of the supporting construction **[5]**

9/08 . . having the capability of expansion **[5]**

9/10 . . Connections between parallel members of the supporting construction (9/08 takes precedence) **[5]**

9/12 . . Connections between non-parallel members of the supporting construction (9/08 takes precedence) **[5]**

9/14 . . . all the members being discontinuous and lying at least partly in the same plane **[5]**

9/16 . . . the members lying in different planes **[5]**

9/18 . Means for suspending the supporting construction **[5]**

9/20 . . adjustable **[5]**

9/22 . Connection of slabs, sheets or the like to the supporting construction **[5]**

9/24 . . with the slabs, sheets or the like positioned on, or held against, horizontal flanges of the supporting construction **[5]**

9/26 . . . by means of snap action of elastically deformable elements **[5]**

9/28 . . with the slabs, sheets or the like having grooves engaging with horizontal flanges of the supporting construction or accessory means connected thereto **[5]**

9/30 . characterised by edge details of the ceiling, e.g. securing to an adjacent wall **[5]**

9/32 . Translucent ceilings, i.e. permitting both the transmission and diffusion of light (9/34 takes precedence; lighting F 21) **[5]**

9/34 . Open-work ceilings, e.g. lattice type (9/30 takes precedence) **[5]**

9/36 . . consisting of parallel slats **[5]**

Indexing scheme associated with groups 1/00 to 9/00, relating to fire protection. The indexing code should be unlinked. [5]

Note

Attention is drawn to Chapter IV of the Guide which sets forth the rules concerning the application and presentation of the different types of indexing code. **[6]**

101:00 **Fire protection [5]**

Indexing scheme associated with subgroup 9/04, relating to the material of the slabs, sheets or the like. The indexing codes should be unlinked. [5]

Note

Attention is drawn to Chapter IV of the Guide which sets forth the rules concerning the application and presentation of the different types of indexing code. **[6]**

103:00 **Material constitution of slabs, sheets or the like [5]**

103:02 . of ceramics, concrete or other stone-like material **[5]**

103:04 . of plastics, fibrous material or wood **[5]**

103:06 . of metal **[5]**