

E04B

GENERAL BUILDING CONSTRUCTIONS; WALLS, e.g. PARTITIONS; ROOFS; FLOORS; CEILINGS; INSULATION OR OTHER PROTECTION OF BUILDINGS (border constructions of opening in walls, floors or ceilings E06B1/00; [N:electromagnetic shielding H05K9/0001]

Definition statement

This subclass/group covers:

Building constructions, i.e. construction of edifices, their structural or non structural walls, their roof structures, their floor structures, suspended or false ceilings;

Insulation of buildings or other protection of buildings.

References relevant to classification in this subclass

This subclass/group does not cover:

Devices for fastening or securing general constructional elements or machine parts together	F16B
Motor vehicles	B62D
Railway vehicles	B61
Ships or other waterborne vessels	B63
Aircrafts; Cosmonautics	B64
Structures specially adapted for buildings for special purposes, general layout of buildings, e.g. modular co-ordination; Masts; Tents;Swimming pools	E04H
Structural elements for building construction	E04C
Roof coverings	E04D
Finishing work on buildings, e.g. lining, flooring	E04F
Scaffolding;Shuttering	E04G

Bridges	E01D
Foundations	E02D
Border constructions of opening in walls, floors or ceilings	E06B 1/00
Electromagnetic shielding	H05K 9/0001

E04B 1/00

Constructions in general; Structures which are not restricted either to walls, e.g. partitions, or floors or ceilings or roofs

Definition statement

This subclass/group covers:

Building constructions in general, i.e. construction of edifices; Structures of buildings which are not restricted either to walls, or floors or ceilings or roofs.

Special structures and methods of construction of buildings, e.g. arched, movable, collapsible, box-like structures; Connections for building structures, e.g. connections of slab-shaped or elongated members; Insulation or other protection of buildings, e.g. against water-damage, heat, sound, fire.

References relevant to classification in this group

This subclass/group does not cover:

Scaffolds, shutterings	E04G
Partitions per se	E04B 2/00
Floor structures per se	E04B 5/00
Roof structures per se	E04B 7/00
Suspended or false ceilings per se	E04B 9/00
Roof coverings per se	E04D
Foundations per se	E02D
Structures specially adapted for buildings for special	E04H

purposes;General layout of buildings, e.g. modular co-ordination	
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E04B 1/0007

[N: Base structures; Cellars]

Definition statement

This subclass/group covers:

Cellars, basements, also retrofitted under existing buildings;

Crawl spaces.

Relationship between large subject matter areas

This subgroup covers foundations with the emphasis on the connection to a superstructure, as opposed to [E02D](#) where the emphasis is on the connection to the ground;

References relevant to classification in this group

This subclass/group does not cover:

Foundations per se	E02D
Drainage and exterior waterproofing of foundation	E02D 31/00

Special rules of classification within this group

Exterior insulation of cellars is classified here.

E04B 1/0023

[N: Building characterised by incorporated canalisations (E04B1/34869, E03C1/01, E04C2/52, E04F17/00 take precedence; canalisation per se F16L; conducts for ventilation, heating systems or air-conditioning F24)]

Definition statement

This subclass/group covers:

Building with passages for fluids integrally formed with structural elements of

the building.

References relevant to classification in this group

This subclass/group does not cover:

Building envelopes with canalisations for insulation purposes	E04B 1/74
Box-like or cell-like units for special technical purposes	E04B 1/34869
Domestic plumbing installations for combinations of baths, showers, sinks, wash-basins, closets, urinals, or the like	E03C 1/01
Slab-shaped or panel-shaped building elements for locating conduits	E04C 2/52
Vertical ducts	E04F 17/00
Canalisation per se	F16L
Conduits for ventilation, heating systems or air-conditioning	F24F
Special adaptation of floor structures for incorporating ducts	E04B 5/48

E04B 1/0046

[N: Loggias]

Definition statement

This subclass/group covers:

Loggias, e.g. wintergardens, enclosed balconies, verandas.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Glass roofs	E04D 3/06
Bay windows	E06B 1/363

Greenhouses	A01G 9/14
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E04B 1/02

Structures consisting primarily of load-supporting, block-shaped, or slab-shaped elements (E04B1/32-E04B1/36 take precedence)

Definition statement

This subclass/group covers:

Structures consisting primarily of large load-supporting panels or large load-supporting panel-shaped blocks.

References relevant to classification in this group

This subclass/group does not cover:

Arched, vaulted or folded structures	E04B 1/32
Extraordinary structures	E04B 1/34
Structures covering a large free area	E04B 1/346
Structures characterised by moveable, separable or collapsible parts	E04B 1/343
Structures composed of e.g. box-like or cell-like units	E04B 1/348
Extraordinary methods of construction	E04B 1/35
Bearings or like supports allowing movement	E04B 1/36
Masonry walls	E04B 2/02

E04B 1/12

The elements being composed of other materials

Definition statement

This subclass/group covers:

Structures with elements consisting of specified materials other than concrete, stone-like material, metal or wood.

E04B 1/14

The elements being composed of two or more materials (of reinforced concrete E04B1/04)

Definition statement

This subclass/group covers:

Structures with elements consisting of the combination of two or more specified structural materials.

References relevant to classification in this group

This subclass/group does not cover:

Structures consisting primarily of reinforced concrete block-shaped or slab-shaped elements	E04B 1/04
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E04B 1/16

Structures made from masses, e.g. of concrete, cast or similarly formed in situ with or without making use of additional elements, such as permanent forms, substructures to be coated with load-bearing material (E04B1/32-E04B1/36 take precedence)

References relevant to classification in this group

This subclass/group does not cover:

Arched, vaulted or folded structures	E04B 1/32
Extraordinary structures	E04B 1/34
Structures covering a large free area	E04B 1/346
Structures characterised by moveable, separable or collapsible parts	E04B 1/343

Structures composed of e.g. box-like or cell-like units	E04B 1/348
Extraordinary methods of construction	E04B 1/35
Bearings or like supports allowing movement	E04B 1/36

E04B 1/161

[N: with vertical and horizontal slabs, both being partially cast in situ]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Stacked prefabricated cells, e.g. with concrete poured between the cells	E04B 1/34807
Permanent inflatable forms for concrete	E04G 11/04

Special rules of classification within this group

Use [E04B 2/84](#) to [E04B 2002/8694](#) for classifying additional information of details of lost formwork of cast in-situ walls.

E04B 1/163

[N: with vertical and horizontal slabs, only the vertical slabs being partially cast in situ (E04B2/86 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Walls made by casting in-situ in permanent forms	E04B 2/86
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Special rules of classification within this group

Use [E04B 2/84](#) to [E04B 2002/8694](#) for classifying additional information of details of lost formwork of cast in-situ walls.

E04B 1/165

[N: with elongated load-supporting parts, cast in situ; E04B1/161, E04B1/163 and E04B1/164 take precedence]

References relevant to classification in this group

This subclass/group does not cover:

Structures made from masses with vertical and horizontal slabs, both being partially cast in situ	E04B 1/161
Structures made from masses with vertical and horizontal slabs, only the vertical slabs being partially cast in situ	E04B 1/163
Structures made from masses with vertical and horizontal slabs, only the horizontal slabs being partially cast in situ	E04B 1/164

E04B 1/166

[N: with curved surfaces, at least partially cast in situ in order to make a continuous concrete shell structure (E04B1/169 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Structures made from masses cast with inflatable flexible permanent forms	E04B 1/169
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E04B 1/18

Structures comprising elongated load-supporting parts, e.g. columns, girders, skeletons (E04B1/32 to E04B1/36 take precedence; elongated load-supporting parts as elements,

trusses, truss-like structures E04C3/00)

Definition statement

This subclass/group covers:

Structures comprising elongated load-supporting parts, e.g. columns, beams, girders, skeletons.

References relevant to classification in this group

This subclass/group does not cover:

Arched, vaulted or folded structures	E04B 1/32
Extraordinary structures	E04B 1/34
Structures covering a large free area	E04B 1/346
Structures characterised by moveable, separable or collapsible parts	E04B 1/343
Structures composed of e.g. box-like or cell-like units	E04B 1/348
Extraordinary methods of construction	E04B 1/35
Bearings or like supports allowing movement	E04B 1/36
Elongated load-supporting parts as elements, columns, beams, girders, trusses, truss-like structures	E04C 3/00
Connection of bar-shaped building elements, i.e. of smaller cross-section	E04B 1/58
Log cabins	E04B 2/701

Special rules of classification within this group

Structures made from a horizontal or vertical juxtaposition of elongated elements other than wood are classified in [E04B 1/18](#);

Structures made from a juxtaposition of porticos or stacks of frames are only classified in [E04B 1/18](#), irrespective of the material of the elongated elements.

E04B 1/19

Three-dimensional framework structures [N: folded structures and grid-like formations acting as shell structures E04B7/10]

Definition statement

This subclass/group covers:

Space frames, i.e. truss-like lightweight structures constructed from interconnected struts in a geometric pattern spanning a large area, with either short struts connected at the nodes or continuous struts folded at the nodes.

References relevant to classification in this group

This subclass/group does not cover:

Cosmonautics	B64G 9/00
Roof structures with folded or grid-like formations acting as shell structures	E04B 7/10

Informative references

Attention is drawn to the following places, which may be of interest for search:

Trusses	E04C 3/02
Truss-like towers or mats	E04H 12/00

Special rules of classification within this group

Documents showing large parts of the space frame are classified here, even if they show details of component parts or their connections; Use [E04B 1/1903](#) to [E04B 2001/1996](#) for classifying additional information of the details of the component parts of the space frame, their connections and the type of space frame for the documents classified in [E04B 1/19](#).

E04B 1/1903

[N: Connecting nodes specially adapted therefor]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Node corner connector for furniture

A47B 47/0016

Special rules of classification within this group

Use [E04B 2001/1924](#) to [E04B 2001/1996](#) for classifying additional information of the details of the component parts of the space frame, their connections and the type of space frame for the documents classified in [E04B 1/1903](#)

E04B 1/1906

[N: with central spherical, semispherical or polyhedral connecting element]

Special rules of classification within this group

Use [E04B 2001/1924](#) to [E04B 2001/1996](#) for classifying additional information of the details of the component parts of the space frame, their connections and the type of space frame for the documents classified in [E04B 1/1906](#)

E04B 1/1909

[N: with central cylindrical connecting element]

Special rules of classification within this group

Use [E04B 2001/1924](#) to [E04B 2001/1996](#) for classifying additional information of the details of the component parts of the space frame, their connections and the type of space frame for the documents classified in [E04B 1/1909](#).

E04B 1/1912

[N: with central cubical connecting element]

Special rules of classification within this group

Use [E04B 2001/1924](#) to [E04B 2001/1996](#) for classifying additional information of the details of the component parts of the space frame, their connections and the type of space frame for the documents classified in [E04B 1/1912](#).

E04B 1/20

The supporting parts consisting of concrete, e.g. reinforced concrete, or other stone-like material

Definition statement

This subclass/group covers:

Structures with posts and beams made from concrete.

References relevant to classification in this group

This subclass/group does not cover:

Space frames	E04B 1/19
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Special rules of classification within this group

Documents showing large parts of the structure are classified here, even if they show details of connections.

E04B 1/24

the supporting parts consisting of metal

Definition statement

This subclass/group covers:

Structures with posts and beams made of metal

References relevant to classification in this group

This subclass/group does not cover:

Space frames	E04B 1/19
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Special rules of classification within this group

Documents showing large parts of the structure are classified here, even if they show details of component parts and their connections. Use [E04B 1/2403](#) to [E04B 2001/2496](#) for classifying additional information of the details of the component parts and their connections of the structures classified in [E04B 1/24](#).

E04B 1/2403

[N: Connection details of the elongated load-supporting parts]

References relevant to classification in this group

This subclass/group does not cover:

Connection of bar-shaped, i.e. of	E04B 1/58
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smaller cross-section, building elements	
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Special rules of classification within this group

Use [E04B 2001/2466](#) to [E04B 2001/2496](#) for classifying additional information of the documents classified in [E04B 1/2403](#).

E04B 1/26

The supporting parts consisting of wood

Definition statement

This subclass/group covers:

Structures with posts and beams made of wood.

References relevant to classification in this group

This subclass/group does not cover:

Space frames	E04B 1/19
Log cabins	E04B 2/701
Caps for the protection of the ends of wooden beams against humidity	E04B 5/12

Informative references

Attention is drawn to the following places, which may be of interest for search:

Load-bearing walls with posts of wood	E04B 2/706
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Special rules of classification within this group

Documents showing large parts of the structure are classified here, even if they show details of component parts and their connections; Use [E04B 1/2604](#) to [E04B 2001/2696](#) for classifying additional information of the documents classified in [E04B 1/26](#).

E04B 1/2604

[N: Connections specially adapted therefor (shear dowels E04B1/486, E04B1/49)]

References relevant to classification in this group

This subclass/group does not cover:

Shear dowels for wood	E04B 1/486
Shear dowels for wood with self-penetrating parts	E04B 1/49

Special rules of classification within this group

Use [E04B 2001/2696](#) for classifying additional information of the documents classified in [E04B 1/2604](#).

E04B 1/2608

[N: Connectors made from folded sheet metal (E04B1/2612 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Joist hangers	E04B 1/2612
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E04B 1/28

the supporting parts consisting of other material

Definition statement

This subclass/group covers:

Structures with posts and beams made of specified material other than concrete, stone-like material, metal, wood.

References relevant to classification in this group

This subclass/group does not cover:

Space frames	E04B 1/19
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Structures with posts and beams made of the combination of at least two different materials having a structural function	E04B 1/30
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E04B 1/30

The supporting parts being composed of two or more materials; Composite steel and concrete constructions (of reinforced concrete E04B1/20)

Definition statement

This subclass/group covers:

Structures with posts and beams made of at least two specified different materials having a structural function, e.g. a steel pipe filled with concrete

References relevant to classification in this group

This subclass/group does not cover:

Space frames	E04B 1/19
Structures made of elongated load supporting parts made of reinforced concrete	E04B 1/20

E04B 1/32

Arched structures; Vaulted structures; Folded structures ([N: E04B1/34378 takes precedence;] vaulted roofs E04B7/08)

Definition statement

This subclass/group covers:

Arched structures; Vaulted structures; Arched or vaulted structures with a folded surface.

References relevant to classification in this group

This subclass/group does not cover:

Structures deriving their rigidity from concertina folds	E04B 1/34378
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Vaulted roof structures	E04B 7/08
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Special rules of classification within this group

Use [E04B 2001/3217](#) to [E04B 2001/3294](#) for classifying additional information of the component parts, their connections and the type of structures of the documents classified in [E04B 1/32](#) to [E04B 1/3211](#).

Do not use [E04B 2001/0061](#) to classify the documents of [E04B 1/32](#) to [E04B 1/3211](#)

E04B 1/3205

[N: Structures with a longitudinal horizontal axis, e.g. cylindrical or prismatic structures]

Definition statement

This subclass/group covers:

Structures in the shape of a portion of a cylinder, with a smooth or faceted surface.

E04B 1/3211

[N: Structures with a vertical rotation axis or the like, e.g. semi-spherical structures]

Definition statement

This subclass/group covers:

Structures in the shape of a portion of a sphere, with a smooth or faceted surface.

E04B 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 (E04B1/342, E04B1/343, E04B1/348 take precedence; for floors E04B5/43; buildings for special purposes, e.g. withstanding earthquake, E04H)

References relevant to classification in this group

This subclass/group does not cover:

Structures covering a large free area	E04B 1/342
Structures characterised by movable, separable or collapsible parts	E04B 1/343
Structures composed of box-like or cell-like units	E04B 1/348
Floor structures of extraordinary design; Features relating to the elastic stability of floors	E04B 5/43
Buildings for special purposes, e.g. withstanding earthquakes	E04H

Special rules of classification within this group

Exterior staircases retrofitted to buildings are classified in [E04B 1/34](#).

E04B 1/3412

[N: mainly supported by a central column or footing
(E04B1/3416 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Structures comprising mainly a central support and a cantilevered roof	E04B 1/3416
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E04B 1/3416

[N: Structures comprising mainly a central support column and a cantilevered roof]

Definition statement

This subclass/group covers:

Mushroom-type structures or elongated structures having a "T" or "Y" vertical cross-section.

E04B 1/342

Structures covering a large free area, whether open-sided or not, e.g. hangars, halls (roof trusses E04C3/00 ; non-structural features for specified purposes, see the relevant groups of E04H)

References relevant to classification in this group

This subclass/group does not cover:

Roof trusses	E04C 3/00
Non-structural features for specified purposes	E04H

E04B 1/343

Structures characterised by movable, separable, or collapsible parts, e.g. for transport (movable roof parts E04B7/16; floatable buildings B63B; small prefabricated buildings, transportable as a whole E04H1/12; small garages E04H6/02; tents or canopies, in general E04H15/00) [N: containers B65G]

References relevant to classification in this group

This subclass/group does not cover:

Movable roof parts	E04B 7/16
Floatable buildings	B63B
Small prefabricated buildings, transportable as a whole	E04H 1/12
Small garages	E04H 6/02
Tents or canopies, in general	E04H 15/00
Containers	B65G

E04B 1/34305

[N: telescopic]

Definition statement

This subclass/group covers:

Structure with room-sized telescopic section extendable horizontally from a side of the structure or vertically from the top or bottom of the structure.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Caravans or campers with telescopic sections	B60P 3/34
Telescopic wheeled arched structures	E04B 1/34368
Telescopic roofs	E04B 7/166
Swimming pools with movable roof sections	E04H 3/165

Special rules of classification within this group

Structures with more than one telescopic section extendable each from different surfaces of the structure, or with telescopic sections comprising two or more nested sub-sections are classified here;

Use [E04B 2001/34394](#) for classifying additional information of documents showing vertically telescoping structures.

E04B 1/3431

[N: with only one level of nesting]

Definition statement

This subclass/group covers:

Structure with a single telescopic section extendable horizontally from a side of the structure or vertically from the top or bottom of the structure

Special rules of classification within this group

Use [E04B 2001/34394](#) for classifying additional information of documents showing vertically telescoping structures

E04B 1/34315

[N: characterised by separable parts]

Special rules of classification within this group

Structures formed of a combination of structural elongated elements and structural panels are classified here.

Use [E04B 2001/34389](#) for classifying additional information of documents showing a set of building elements forming a self-contained package for transport before assembly.

E04B 1/34321

[N: mainly constituted by panels]

Special rules of classification within this group

Use [E04B 2001/34389](#) for classifying additional information of documents showing a set of building elements forming a self-contained package for transport before assembly.

Use [E04B 1/61](#) to [E04B 2001/6195](#) for classifying additional information of the details of the connections of the panels.

E04B 1/34326

[N: mainly constituted by longitudinal elements]

Special rules of classification within this group

Use [E04B 2001/34389](#) for classifying additional information of documents showing a set of building elements forming a self-contained package for transport before assembly.

Use [E04B 1/58](#) to [E04B 2001/5893](#) for classifying additional information of the details of the connections of the longitudinal elements.

E04B 1/34336

[N: Structures movable as a whole]

Definition statement

This subclass/group covers:

Mobile home structures

References relevant to classification in this group

This subclass/group does not cover:

Vehicle aspects of mobile homes	B60P 3/32
Structures composed of a number of box-like units	E04B 1/348

Special rules of classification within this group

Use [E04B 1/34305](#), [E04B 1/3431](#) and [E04B 2001/34394](#) for classifying additional information of documents showing telescoping structures.

E04B 1/34347

[N: Anchoring means therefor]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Ground anchors	E02D 5/80
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E04B 1/34357

[N: Foldable or retractable structures]

References relevant to classification in this group

This subclass/group does not cover:

Collapsible structures with hinged parts	E04B 1/344
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Special rules of classification within this group

Use [E04B 2001/34389](#) for classifying additional information of documents showing a set of building elements forming a self-contained package for transport before assembly.

E04B 1/34363

[N: with provisions to raise or lower the whole structure]

Definition statement

This subclass/group covers:

Structures with means for raising and lowering them above ground level;

Structures with means for retracting them into the ground and returning them to ground level.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Telescopic structures	E04B 1/34305
Buildings raisable in case of floods	E04H 9/145

E04B 1/34368

[N: Wheeled arch-type structures]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Roofs with movables sections	E04B 7/16
Swimming pools with movable roof sections	E04H 3/165
Greenhouses with sliding roofs	A01G 9/16
Weather protection for road works	E01C 23/03
Weather protection for building works	E04G 21/28

Special rules of classification within this group

Half-arches wheeled at one extremity against a building wall and at the other end on the ground are also classified here.

E04B 1/344

with hinged parts

Informative references

Attention is drawn to the following places, which may be of interest for search:

Collapsible caravans	B60P 3/34
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Special rules of classification within this group

Use [E04B 1/34336](#) for classifying additional information of documents showing mobile homes.

Do not use [E04B 1/34321](#) to classify the documents of [E04B 1/344](#).

E04B 1/3441

[N: with articulated bar-shaped elements]

Special rules of classification within this group

Collapsible articulated space frames are classified here.

E04B 1/3445

[N: foldable in a flat stack of parallel panels]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Collapsible large containers	B65D 88/52
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Special rules of classification within this group

Do not use [E04B 2001/34389](#) to classify the documents of [E04B 1/3445](#) and [E04B 1/3447](#).

E04B 1/3448

[N: with rotating shell-forming segments]

Definition statement

This subclass/group covers:

Structures with rotating shell-forming segments, e.g. armadillo plates type structure.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Roof structures with movable sections	E04B 7/16
Swimming pools with movable roof sections	E04H 3/165

E04B 1/346

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

Informative references

Attention is drawn to the following places, which may be of interest for search:

Turntable for vehicles	B60S 13/02
Carousels for milking stations	A01K 1/126

Special rules of classification within this group

Do not use [E04B 2001/0061](#) to classify the documents of [E04B 1/346](#).

E04B 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

Definition statement

This subclass/group covers:

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, i.e. only the edges of the boxes or cells are materialized (only frame, no infill panels)

Special rules of classification within this group

In [E04B 1/348](#) to [E04B 1/34861](#) use [E04B 2001/34876](#) to [E04B 2001/34892](#) for classifying additional information of documents showing sloping or barrel roof, or means allowing access to the structures.

E04B 1/34807

[N: Elements integrated in a skeleton]

Definition statement

This subclass/group covers:

Box-like units resting on shelves or beams of a supporting structure;

Stacked cells with concrete poured between the cells.

E04B 1/34823

[N: the supporting structure consisting of concrete]

Definition statement

This subclass/group covers:

Structures with the main vertical structural parts consisting of concrete.

E04B 1/3483

[N: the supporting structure consisting of metal]

Definition statement

This subclass/group covers:

Structures with the main vertical structural parts consisting of metal.

E04B 1/34838

[N: the supporting structure consisting of wood]

Definition statement

This subclass/group covers:

Structures with the main vertical structural parts consisting of wood.

E04B 1/34846

[N: the supporting structure consisting of other specified material, e.g. of plastics]

Definition statement

This subclass/group covers:

Structures with the main vertical structural parts consisting of specified

material other than concrete, metal, wood.

E04B 1/34853

[N: the supporting structure consisting of other specified material, e.g. of plastics]

Definition statement

This subclass/group covers:

Structures with the main vertical structural parts consisting of the combination of two or more specified structural materials.

E04B 1/34869

[N: Elements for special technical purposes, e.g. with a sanitary equipment (combination of baths, douches, sinks, wash-basins, closets or urinals A47K4/00; plumbing installations for baths, douches, or the like, E03C1/01; panels serving for locating conduits E04C2/521; ducts for receiving installation lines E04F17/08)]

Definition statement

This subclass/group covers:

Structures composed of units comprising at least considerable parts of two sides of a room where the units are pre-fitted for special technical purposes, e.g. with pre-fitted piping, plumbing or sanitary equipment.

References relevant to classification in this group

This subclass/group does not cover:

Combination of baths, douches, sinks, wash-basins, closets or urinals	A47K 4/00
Plumbing installations for baths, douches, or the like	E03C 1/01
Panels serving for locating conduits	E04C 2/521
Ducts for receiving installation lines	E04F 17/08

Informative references

Attention is drawn to the following places, which may be of interest for search:

Structures composed of a number of box-like units	E04B 1/348
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Special rules of classification within this group

Use [E04B 2001/34876](#) to [E04B 2001/34892](#) for classifying additional information of documents of [E04B 1/34869](#) showing sloping or barrel roof, or means allowing access to the structures.

E04B 1/35

Extraordinary methods of construction, e.g. lift-slab, jack-block (E04B1/34 takes precedence; falsework, shuttering for shaping walls, floors, ceilings or roofs in situ E04G11/04; conveying or assembling of building materials E04G21/00; working measure on existing buildings E04G23/00)

References relevant to classification in this group

This subclass/group does not cover:

Extraordinary structures	E04B 1/34
Falsework, shuttering for shaping walls, floors, ceilings or roofs in situ	E04G 11/04
Conveying or assembling of building materials	E04G 21/00
Working measures on existing buildings	E04G 23/00

Special rules of classification within this group

Use [E04B 2001/3561](#) to [E04B 2001/3594](#) for classifying additional information of the documents of [E04B 1/35](#) to [E04B 1/3555](#).

E04B 1/3505

[N: characterised by the in-situ moulding of large parts of a structure (E04B1/3511, E04B1/3516, E04B1/3522, E04B1/3533, E04B1/3544, E04B1/355 take precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Lift-slab;Extraordinary methods of construction characterised by a purely vertical lifting of floors or roofs or parts thereof	E04B 1/3511
Extraordinary methods of construction characterised by erecting a vertical structure and then adding the floors from top to bottom	E04B 1/3516
Extraordinary methods of construction characterised by raising a structure and then adding structural elements under it	E04B 1/3522
Extraordinary methods of construction characterised by the raising of hingedly-connected building elements, e.g. arches, portal frames	E04B 1/3533
Extraordinary methods of construction characterised by the use of a central column to lift and temporarily or permanently support structural elements	E04B 1/3544
Extraordinary methods of construction characterised by the tilting-up of whole buildings or sections thereof, e.g. walls, portal frames	E04B 1/355

Informative references

Attention is drawn to the following places, which may be of interest for search:

Structures made from masses cast in-situ	E04B 1/16
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E04B 1/3522

[N: characterised by raising a structure and then adding

structural elements under it (E04B1/3511, E04B1/3516, E04B1/3533 take precedence)]

Definition statement

This subclass/group covers:

Structure raisable using temporary supports, e.g. scaffolding or lifting machines, or permanent supports.

References relevant to classification in this group

This subclass/group does not cover:

Lift-slab; Extraordinary methods of construction characterised by a purely vertical lifting of floors or roofs or parts thereof	E04B 1/3511
Extraordinary methods of construction characterised by erecting a vertical structure and then adding the floors from top to bottom	E04B 1/3516
Extraordinary methods of construction characterised by the raising of hingedly-connected building elements, e.g. arches, portal frames	E04B 1/3533

E04B 1/3527

[N: the structure being a roof]

Definition statement

This subclass/group covers:

Method of construction whereby the walls are added under the raised roof, e.g. in order to enable work in dry conditions

Informative references

Attention is drawn to the following places, which may be of interest for search:

Enlarging an existing structure	E04G 23/0266
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E04B 1/3533

[N: characterised by the raising of hingedly-connected building elements, e.g. arches, portal frames (E04B1/355 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Extraordinary methods of construction characterised by the tilting-up of whole buildings or sections thereof, e.g. walls, portal frames	E04B 1/355
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Structures with hinged parts	E04B 1/344
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E04B 1/3544

[N: characterised by the use of a central column to lift and temporarily or permanently support structural elements (E04B1/3516 and E04B1/355 take precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Extraordinary methods of construction characterised by erecting a vertical structure and then adding the floors from top to bottom	E04B 1/3516
Extraordinary methods of construction characterised by the tilting-up of whole buildings or sections thereof, e.g. walls, portal frames	E04B 1/355

Informative references

Attention is drawn to the following places, which may be of interest for search:

Small buildings mainly supported by a central column or footing	E04B 1/3412
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E04B 1/36

Bearings or like supports allowing movement (for bridges E01D19/04; buildings with-standing earthquakes E04H9/02)

Definition statement

This subclass/group covers:

Bearings allowing movement of the supported structure due to exterior influences, but also allowing movement for the purpose of adjusting horizontal or angular position of the supported structure.

References relevant to classification in this group

This subclass/group does not cover:

Bearings for bridges	E01D 19/04
Buildings withstanding earthquakes	E04H 9/02

Informative references

Attention is drawn to the following places, which may be of interest for search:

Rubber bearings	F16F 1/36 , F16F 3/08
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E04B 1/38

Connections for building structures in general

Special rules of classification within this group

Documents should only exceptionally be classified in [E04B 1/38](#), connections for general applications should be classified in subclass [F16B](#).

E04B 1/40

[N: IPC 4] Separate connecting elements (for forms, falsework, or shutterings E04G17/00; releasable clips or clamps, hooks,

wedges, wall-dowels, nails, bolts, rivets, screws, wood-screws F16B) [N: Warning [N0410] Group E04B1/40[N: IPC4] is no longer used for the classification of new documents. The backlog of this group is in the process of being reorganised to group E04B1/41 and subgroups]

References relevant to classification in this group

This subclass/group does not cover:

Connecting elements for forms, falsework, or shutterings	E04G 17/00
Releasable clips or clamps, hooks, wedges, wall-dowels, nails, bolts, rivets, screws, wood-screws	F16B

Special rules of classification within this group

Documents should only exceptionally be classified in [E04B 1/40](#), connections for general applications should be classified in subclass [F16B](#).

E04B 1/41

Connecting devices specially adapted for embedding in concrete ([N: joist hangers E04B1/2612; shear dowels E04B1/483]; spacers [N: other than masonry wall ties] for cavity walls E04B2/30, E04B2/44; connectors for reinforcing elements E04C5/16; supporting devices for connector reinforcing rods for concrete walls E04G21/125; fastening frames to the border of openings E06B1/56)

References relevant to classification in this group

This subclass/group does not cover:

Spacers between rows of masonry blocks	E04G 21/1841 E04B 2002/0282
Joist hangers	E04B 1/2612
Shear dowels for concrete parts	E04B 1/483
Spacers other than masonry wall ties for cavity walls	E04B 2/30 E04B 2/44

Connectors for reinforcing elements	E04C 5/16
Supporting devices for connector reinforcing rods for concrete walls	E04G 21/125
Fastening frames to the border of openings	E06B 1/56

Special rules of classification within this group

Use [E04B 2001/4192](#) for classifying additional information of connecting devices which are attached to the concrete reinforcement members for the documents classified in [E04B 1/41](#) to [E04B 1/4178](#).

E04B 1/4114

[N: Elements with sockets (E04B1/4107 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Longitudinal elements having an open profile, with the opening parallel to the concrete or masonry surface, i.e. anchoring rails	E04B 1/4107
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E04B 1/4142

[N: with transverse hook- or loop-receiving parts (E04B1/415 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Elements with captive and extendable anchoring parts, e.g. spring-loaded bolts, hanging rings	E04B 1/415
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E04B 1/4171

[N: Nailable or non-threaded screwable elements (dowels

F16B13/00)]

References relevant to classification in this group

This subclass/group does not cover:

Dowels for holding a fastener	F16B 13/00
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E04B 1/4178

[N: Masonry wall ties (with insulation-layer locating devices E04B1/7616; replacing or adding wall ties E04G23/0222)]

Definition statement

This subclass/group covers:

Separate tie rods embedded in the horizontal or vertical masonry joints, for tying a masonry wall to a non-masonry support, e.g. a concrete wall or posts, or for making a T-junction between two masonry walls.

References relevant to classification in this group

This subclass/group does not cover:

Masonry blocs with integrated spacers or masonry walls with spacers not located in the masonry joints	E04B 2/02
Masonry wall ties with insulation-layer locating devices	E04B 1/7616
Replacing or adding wall ties	E04G 23/0222

Informative references

Attention is drawn to the following places, which may be of interest for search:

Walls of framework or pillar-work with a brick veneer facing	E04B 2002/565
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Special rules of classification within this group

Use [E04B 2001/4192](#) for classifying additional information of connecting

devices which are attached to the concrete reinforcement members.

Use [E04B 1/7616](#) for classifying additional information of connecting devices which are combined with insulation-layer locating devices.

E04B 1/4185

[N: for cavity walls with both wall leaves made of masonry (spacers for permanent forms E04B2/86)]

Definition statement

This subclass/group covers:

Separate tie rods embedded in horizontal or vertical masonry joints, for tying two parallel masonry walls together.

References relevant to classification in this group

This subclass/group does not cover:

Spacers for permanent forms	E04B 2/86
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Special rules of classification within this group

Use [E04B 1/7616](#) for classifying additional information of connecting devices which are combined with insulation-layer locating devices.

E04B 1/486

[N: Shear dowels for wood (E04B1/49 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Shear dowels with self-penetrating parts	E04B 1/49
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E04B 1/49

With self-penetrating parts, e.g. claw dowels [N: (nail plates F16B15/0023)]

References relevant to classification in this group

This subclass/group does not cover:

Nail plates	F16B 15/0023
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E04B 1/54

[N: IPC 4] Joints substantially without separate connecting elements, e.g. jointing by inter-engagement (welded, glued, or the like joints, in general F16B)

References relevant to classification in this group

This subclass/group does not cover:

Welded, glued, or the like joints, in general	F16B
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E04B 1/58

Of bar-shaped building elements [N: (framework connections E04B1/21, E04B1/2403, E04B1/2604)]

Relationship between large subject matter areas

Joints with emphasis on the bar-shaped element, as opposed to [F16B 7/00](#) where the emphasis is on the connector.

References relevant to classification in this group

This subclass/group does not cover:

Connections of large longitudinal structural elements	E04B 1/21 E04B 1/2403 E04B 1/2604
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Connections of rods	F16B 7/00
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Special rules of classification within this group

Use [E04B 2001/5862](#) to [E04B 2001/5893](#) for classifying additional information of the documents classified in [E04B 1/58](#) to [E04B 1/5818](#).

E04B 1/5825

[N: with a closed cross-section]

Special rules of classification within this group

Use [E04B 2001/5862](#) to [E04B 2001/5893](#) and [E04B 2001/5856](#) for classifying additional information of the documents of [E04B 1/5825](#) to [E04B 1/585](#).

E04B 1/61

Of slab-shaped building elements with each other

Relationship between large subject matter areas

Joints with emphasis on the slab-shaped element, as opposed to [F16B 7/00](#) where the emphasis is on the connector.

References relevant to classification in this group

This subclass/group does not cover:

Connections for furniture	F16B 12/00
Connections of sheet metal panels	F16B 5/00
Connections for structural concrete panels	E04B 1/043

Informative references

Attention is drawn to the following places, which may be of interest for search:

Joining sheets or plates	F16B 5/00
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Special rules of classification within this group

Use [E04B 2001/6195](#) as additional information to classify slabs connected at an angle for documents classified in [E04B 1/61](#) to [E04B 1/6187](#) and [E04B 2001/6191](#).

E04B 1/6183

[N: with rotatable locking means co-operating with a recess (similar devices for sliding doors E05B65/0817)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Rotating connectors	F16B 5/0092 F16B 12/2009
Locks for sliding doors with bolt pivoting about an axis perpendicular to the wings	E05B 65/0817

E04B 1/62

Insulation or other protection; Elements or use of specified material therefor (chemical compositions C01 to C11; implements for applying insulation or sealings E04F21/00; buildings to withstand or to provide protection against external undesired influences E04H9/00; sealing pipes in walls or partitions F16L5/02 ; shielding against dangerous radiation G21F; constructions of particular parts of buildings, see the relevant groups for those parts)

Definition statement

This subclass/group covers:

Insulation or other protection for buildings in general; Elements or use of specified material for insulation of buildings or other protection of buildings.

References relevant to classification in this group

This subclass/group does not cover:

Insulation of partition walls	E04B 2/00
Insulation of floor structures	E04B 5/00
Insulation of roofs	E04B 7/00 , E04D 13/16
Insulation of suspended ceilings	E04B 9/00
Insulation of floorings, e.g. floating floors	E04F 15/18

Chemical compositions	C01 to C11
Implements for applying insulation or sealings	E04F 21/00
Buildings to withstand or to provide protection against external undesired influences	E04H 9/00
Sealing pipes in walls or partitions	F16L 5/02
Shielding against dangerous radiation	G21F

E04B 1/64

For making damp-proof; Protection against corrosion (sealings E04B1/66)

References relevant to classification in this group

This subclass/group does not cover:

Sealings	E04B 1/66
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E04B 1/642

[N: Protecting metallic construction elements against corrosion (for concrete reinforcing elements made of steel E04C5/01; anodic or cathodic protection C23F13/00)]

References relevant to classification in this group

This subclass/group does not cover:

Protection of concrete reinforcing elements made of steel	E04C 5/01
Anodic or cathodic protection	C23F 13/00

E04B 1/644

[N: Damp-proof courses (in combination with lintels E04C3/02

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Definition statement

This subclass/group covers:

Damp-proof courses installed during construction of the structure, also retro-fitted e.g. by driving plates in masonry joints.

References relevant to classification in this group

This subclass/group does not cover:

Damp-proof courses in combination with lintels	E04C 3/02
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Sealing membranes, sealing coatings	E04B 1/66
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E04B 1/646

[N: obtained by removal and replacement of a horizontal layer of an existing wall]

Definition statement

This subclass/group covers:

Damp-proof courses made of a plate, sheet, or hardening composition, e.g. mortar.

E04B 1/648

[N: obtained by injection or infiltration of water-proofing agents into an existing wall]

Special rules of classification within this group

Documents with details of the composition and manufacture of water-proofing agents should be additionally classified in the relevant classes for these compositions, e.g. [C08L](#) for bituminous compositions

E04B 1/66

Sealings ([N: damp-proof courses E04B1/644; fire-proof sealings E04B1/948]; additions of anti-leak properties to plaster C04B; bituminous sealing masses C08L95/00; sealings for hydraulic engineering work in general E02B3/16; against ground humidity or ground water E02D31/02 ; coverings against rain or other precipitations of the atmosphere E04D; composition of material or manufacture of sealing foils, see the relevant classes for these foils)

Definition statement

This subclass/group covers:

Sealing membranes or coatings for buildings in general.

References relevant to classification in this group

This subclass/group does not cover:

Composition of material	C08G C08L C09D C04B
Manufacture of sealing foils	C08J D06N B29C B29D B32B
Water-proofing of tunnels	E21D 11/38
Roofing membranes	E04D 5/00
Repairing sealings	E04G 23/02
Sealing where pipes, cables pass through walls or partitions	F16L 5/02
Damp-proof courses	E04B 1/644
Fire-proof sealings	E04B 1/948
Additions of anti-leak properties to plaster	C04B
Bituminous sealing masses	C08L 95/00
Sealings for hydraulic engineering work in general	E02B 3/16
Sealings against ground humidity or ground water	E02D 31/02
Roof coverings against rain or other	E04D

precipitations of the atmosphere	
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Repairs, e.g. by sealing impregnation	E04G 23/02
Sealing in water management	E02B 3/00

Special rules of classification within this group

Documents with details of the composition or manufacture of sealing agents should be additionally classified in the relevant classes for these compositions.

E04B 1/68

of joints, e.g. expansion joints (packing for joints in roads or airfields E01C11/02; expansion joints for bridges E01D19/06; sealing joints between foundation piles E02D5/14; joints in foundation structures E02D29/16; devices for sealing the spaces or joints between roof-covering elements E04D1/36; sealing joints between roof-covering elements E04D3/38; [N: construction of joints for flooring or floor layers composed of a number of similar elements E04F15/02005]; construction of joints for flooring or floor layers made of masses in situ E04F15/14)

References relevant to classification in this group

This subclass/group does not cover:

Repairing sealings of joints	E04G 23/02
Tools for inserting or removing sealing strips	B25B 27/0092
Machines for inserting or removing sealing strips	B23P 19/047
Packing for joints in roads or airfields	E01C 11/02
Expansion joints for bridges	E01D 19/06

Sealing joints between foundation piles	E02D 5/14
Joints in foundation structures	E02D 29/16
Devices for sealing the spaces or joints between roof-covering elements	E04D 1/36
Sealing joints between roof-covering elements	E04D 3/38
Construction of joints for flooring or floor layers composed of a number of similar elements	E04F 15/02005
Construction of joints for flooring or floor layers made of masses in situ	E04F 15/14

Informative references

Attention is drawn to the following places, which may be of interest for search:

Sealing of joints in water management	E02B 3/16
Sealing in mechanical engineering	F16J 15/00

Special rules of classification within this group

Use [E04B 2001/6818](#) for documents classified in [E04B 1/68](#) to [E04B 1/6816](#) for classifying additional information of joints comprising swellable parts.

E04B 1/6801

[N: Fillings therefor]

Definition statement

This subclass/group covers:

Joints using a putty-like filler, with or without backing strip.

E04B 1/6803

[N: Joint covers (E04B1/6815 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Expansion elements specially adapted for wall or ceiling parts	E04B 1/6815
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E04B 1/6806

[N: Waterstops (E04B1/6807 takes precedence)]

Definition statement

This subclass/group covers:

Sealing strips embedded in two succesively poured concrete structures.

References relevant to classification in this group

This subclass/group does not cover:

Expansion elements for parts cast in situ	E04B 1/6807
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E04B 1/6807

[N: Expansion elements for parts cast in situ]

Definition statement

This subclass/group covers:

Waterstops with a central deformable section, e.g. hollow or folded.

E04B 1/6813

[N: Compressable seals of hollow form (E04B1/6816 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Porous tubular seals for injecting sealing material	E04B 1/6816
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E04B 1/6815

[N: Expansion elements specially adapted for wall or ceiling parts]

References relevant to classification in this group

This subclass/group does not cover:

Finishing strips for the junction of a wall and a ceiling	E04F 19/0436
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E04B 1/6816

[N: Porous tubular seals for injecting sealing material (filling of cracks in existing buildings E04G23/02)]

References relevant to classification in this group

This subclass/group does not cover:

Filling of cracks in existing buildings	E04G 23/02
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E04B 1/70

Drying or keeping dry, e.g. by air vents ([N: using damp-proof courses E04B1/644; using sealings, e.g. sealing masses or foils, E04B1/66]; during erection E04G21/28)

References relevant to classification in this group

This subclass/group does not cover:

Caps for the protection of the ends of wooden beams against humidity	E04B 5/12
Repairing sealings	E04G 23/02
Drying or keeping dry using damp-proof courses	E04B 1/644
Drying or keeping dry using sealings, e.g. sealing masses or foils	E04B 1/66

Drying or keeping dry during erection	E04G 21/28
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E04B 1/7007

[N: by using electricity, e.g. electro-osmosis (electrochemical desalination or re-alkalisation of reinforced concrete C04B41/00)]

Definition statement

This subclass/group covers:

Drying or keeping dry by the use of electricity, e.g. electro-osmosis, electrical heating of a wall or a room, electrical ventilation.

References relevant to classification in this group

This subclass/group does not cover:

Electrochemical desalination or re-alkalisation of reinforced concrete	C04B 41/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Removing salts from walls	E04G 23/00
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E04B 1/7015

[N: by heating the ambient air]

Definition statement

This subclass/group covers:

Drying by heating the ambient air, e.g. using a burner.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cellars	E04B 1/0007
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E04B 1/7023

[N: by collecting water in basements]

References relevant to classification in this group

This subclass/group does not cover:

Drainage around foundations	E02D 31/02
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Cellars	E04B 1/0007
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E04B 1/7069

[N: by ventilating (means for ventilating in floors E04B5/48, in ceilings E04B9/02, in building blocks E04C1/392, in building panels E04C2/521, in roofs E04D13/16; ventilating wall coverings E04F13/007)]

References relevant to classification in this group

This subclass/group does not cover:

Means for ventilating in floors	E04B 5/48
Means for ventilating in ceilings	E04B 9/02
Means for ventilating in building blocks	E04C 1/392
Means for ventilating in building panels	E04C 2/521
Means for ventilating in roofs	E04D 13/16
Ventilating wall coverings	E04F 13/007

Informative references

Attention is drawn to the following places, which may be of interest for search:

Air-ducts or air channels	E04F 17/04
Electrical ventilation for drying rooms	E04B 1/7007

E04B 1/7076

[N: Air vents for walls]

Definition statement

This subclass/group covers:

Connections of the interior of the building or the interior of the wall with the exterior of the building; Air vents for crawl spaces.

References relevant to classification in this group

This subclass/group does not cover:

Pest control by keeping dry	E04B 1/70
Impregnation of wood or like materials	B27K

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements for catching or killing insects	A01M 1/24
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Special rules of classification within this group

Documents with air vents for walls in combination with other aspects of ventilation are classified in [E04B 1/7069](#).

Pest control , [E04B 1/72](#).

E04B 1/74

Heat, sound or noise insulation, absorption, or reflection (forms of, or arrangements in, rooms for influencing or

directing sound E04B1/99). Other building methods affording favourable thermal or acoustical conditions, e.g. accumulating of heat within walls (fire protection E04B1/94; elements chiefly adapted for structural purposes E04C1/00 to E04C3/00; chiefly adapted for surface covering E04F13/00; as underlayers for floor coverings E04F15/18 ; closures for wall or like openings E06B)

References relevant to classification in this group

This subclass/group does not cover:

Forms of, or arrangements in, rooms for influencing or directing sound	E04B 1/99
Fire protection	E04B 1/94
Elements chiefly adapted for structural purposes	E04C 1/00 E04C 2/00 E04C 3/00
Elements; chiefly adapted for surface covering	E04F 13/00
Elements chiefly adapted as underlayers for floor coverings	E04F 15/18
Closures for wall or like openings	E06B

Informative references

Attention is drawn to the following places, which may be of interest for search:

Thermal insulation in general	F16L 59/00
Noise damping in general	G10K 11/00
Use of solar heat	F24J 2/00
Heat storage using latent heat	F28D 20/02

Special rules of classification within this group

Heat insulation of the whole building envelope and active heat insulation, e.g. walls with ventilation conduits for insulation purpose, are classified in

[E04B 1/74](#).

E04B 1/76

specifically with respect to heat only (heat insulation in general F16L59/00)

References relevant to classification in this group

This subclass/group does not cover:

Insulating elements of car bodies	B60R 13/08
Heat insulation in general	F16L 59/00

Special rules of classification within this group

Use [E04B 2001/741](#) to [E04B 2001/7695](#) for classifying additional information of the documents classified in [E04B 1/76](#) to [E04B 1/806](#) and [E04B 1/88](#), [E04B 1/90](#)

E04B 1/7604

[N: fillings for cavity walls]

References relevant to classification in this group

This subclass/group does not cover:

Implements or machines for applying insulating material	E04F 21/06
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E04B 1/7616

[N: with insulation-layer locating devices combined with wall ties]

Special rules of classification within this group

Also classify in [E04B 1/4178](#) or [E04B 1/4185](#) when combined with masonry wall ties.

E04B 1/762

[N: Exterior insulation of exterior walls]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Bases for plaster	E04F 13/04
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E04B 1/7633

[N: Dowels with enlarged insulation retaining head]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Fastening of an exterior insulation on a roof using screws or nails	E04D 3/3601
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E04B 1/7637

[N: Anchoring of separate elements through the lining to the wall]

References relevant to classification in this group

This subclass/group does not cover:

Hinges or other suspension devices for doors, windows or wings	E05D
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E04B 1/7654

[N: comprising an insulating layer, disposed between two longitudinal supporting elements, e.g. to insulate ceilings]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Insulating material disposed between the purlins or rafters of a roof	E04D 13/1625
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E04B 1/7662

[N: comprising fiber blankets or batts]

References relevant to classification in this group

This subclass/group does not cover:

Manufacturing of inorganic fiber blankets or batts	D04H 1/4209 D04H 3/002 D04H 5/12
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Special rules of classification within this group

Documents concerning fiber blankets or batts mentioning heat and sound insulation but without giving characteristics specific to sound insulation are classified in [E04B 1/7662](#) to [E04B 1/767](#).

E04B 1/78

Heat insulating elements [N: E04B1/7662 takes precedence]

References relevant to classification in this group

This subclass/group does not cover:

Heat insulating fiber blankets or batts	E04B 1/7662
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E04B 1/80

slab-shaped

Informative references

Attention is drawn to the following places, which may be of interest for search:

Nailable or screwable inserts for foam panels	E04B 2001/386
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E04B 1/803

[N: with vacuum spaces included in the slab]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Thermal insulation in general, using	F16L 59/06
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vacuum	
Cold rooms, refrigerators using vacuum insulation	F25D 2201/14

E04B 1/82

specifically with respect to sound only ([N: of floors or ceilings E04B9/001; of flooring E04F15/20]; noise damping in ducts or channels E04F17/00; [N: sound damping devices for pipes F16L55/033]; noise damping in general G10K11/00)

Definition statement

This subclass/group covers:

Sound insulation for buildings in general and for structural walls.

References relevant to classification in this group

This subclass/group does not cover:

Sound insulation of suspended or false ceilings	E04B 9/001
Sound insulation of flooring	E04F 15/20
Partition walls with special measures for sound insulation	E04B 2/7403 , E04B 2/7409
Noise damping in ducts or channels	E04F 17/00
Sound damping devices for pipes	F16L 55/033
Noise damping in general	G10K 11/00
Insulating elements of car bodies	B60R 13/08

Special rules of classification within this group

Use [E04B 2001/741](#) to [E04B 2001/748](#) and [E04B 2001/8245](#) to [E04B 2001/8495](#) for classifying additional information of the documents classified in [E04B 1/82](#) to [E04B 1/90](#).

E04B 1/8209

[N: sound absorbing devices] (E04B1/8218, E04B1/8227 take precedence)]

Definition statement

This subclass/group covers:

Passive noise absorption body located in a room for absorbing the noise generated in the room.

References relevant to classification in this group

This subclass/group does not cover:

Ceiling with acoustic baffles	E04B 9/34
Soundproof enclosures	E04B 1/8218
Screens; Arrangements of sound-absorbing elements, e.g. baffles	E04B 1/8227

E04B 1/8218

[N: Soundproof enclosures]

Definition statement

This subclass/group covers:

Enclosures keeping the noise out or in.

E04B 1/8227

[N: Screens (E04B2/74 takes precedence; for road or railway traffic E01F) ; Arrangements of sound-absorbing elements, e.g. baffles]

References relevant to classification in this group

This subclass/group does not cover:

Partition walls	E04B 2/72 E04B 2/74
Ceiling with acoustic baffles	E04B 9/34

Screens for road or railway traffic	E01F
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E04B 1/84

Sound-absorbing elements

Definition statement

This subclass/group covers:

Structural elements, specifically for sound absorption.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Structural building elements in general	E04C
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E04B 1/8404

[N: block-shaped]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Block-shaped building elements in general	E04C 1/00
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E04B 1/8409

[N: sheet-shaped]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Sheet-shaped building elements in general	E04C 2/00
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E04B 1/86

slab-shaped

Informative references

Attention is drawn to the following places, which may be of interest for search:

Panel or slab-shaped building elements in general	E04C 2/00
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E04B 1/88

Insulating elements for both heat and sound

Informative references

Attention is drawn to the following places, which may be of interest for search:

Structural building elements in general	E04C
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Special rules of classification within this group

Documents concerning fiber blankets or batts mentioning heat and sound insulation but without giving characteristics specific to sound insulation are classified in [E04B 1/7662](#) to [E04B 1/767](#)

E04B 1/90

slab-shaped

Informative references

Attention is drawn to the following places, which may be of interest for search:

Panel or slab-shaped building elements in general	E04C 2/00
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E04B 1/92

Protection against other undesired influences or dangers (buildings providing protection against external dangers E04H9/00 ; shielding against dangerous radiation G21F)

Definition statement

This subclass/group covers:

Protection against other undesired influences or dangers for buildings in general, e.g. fire or vibrations and shocks originating from inside the building or due to wind or traffic, e.g. using mass damping systems.

References relevant to classification in this group

This subclass/group does not cover:

Screening of rooms against electric or magnetic fields	H05K 9/0001
Protection of foundations against entry of noxious gases, e.g. radon	E02D 31/008
Buildings providing protection against external dangers, e.g. earthquake- or hurricane-proof buildings	E04H 9/00
Shielding against dangerous radiation	G21F

Special rules of classification within this group

Use [E04B 2001/925](#) for classifying additional information of the documents classified in [E04B 1/92](#).

E04B 1/94

against fire ([N: fire protection of partitions E04B2/7403, E04B2/7409; supporting constructions for ceilings having the capability of expansion in case of fire E04B9/08]; fire-fighting A62C, [N: e.g. fire prevention or containment A62C2/00]; impregnation of wood or similar materials B27K; [N: fireproof paints C09D5/18; fireproofing materials C09K21/00; flame-resistant papers D21H5/0002; coverings or linings, e.g. for walls or ceilings, in general E04F13/00]; fireproof doors E06B5/16; [N: firebreak devices for pipes or the like passing through walls F16L5/04; protection of pipes by means of non-inflammable material F16L57/00B])

References relevant to classification in this group

This subclass/group does not cover:

Permanently installed fire-fighting	A62C 35/00
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equipment	
Fire prevention or containment	A62C 2/00
Firebreaks for passages of pipes, cables or protective tubing through walls or partitions	F16L 5/04
Fire protection of partitions	E04B 2/7403 E04B 2/7409
Supporting constructions for ceilings having the capability of expansion in case of fire	E04B 9/08
Fire-fighting	A62C
Fire prevention or containment	A62C 2/00
Impregnation of wood or similar materials	B27K
Fireproof paints	C09D 5/18
Fireproofing materials	C09K 21/00
Flame-resistant papers	D21H 5/0002
Coverings or linings, e.g. for walls or ceilings, in general	E04F 13/00
Fireproof doors	E06B 5/16
Firebreak devices for pipes or the like passing through walls	F16L 5/04
Protection of pipes by means of non-inflammable material	F16L 57/00B

Special rules of classification within this group

Documents with details of the composition of fireproofing compounds should also be classified in the relevant classes for these compositions;

Use [E04B 2001/949](#) for classifying additional information of the documents

classified in [E04B 1/94](#) to [E04B 1/945](#) .

E04B 1/941

[N: Building elements specially adapted therefor]

Special rules of classification within this group

Fusible suspension supports are classified in [E04B 1/941](#).

E04B 1/942

[N: slab-shaped]

Special rules of classification within this group

Documents with details of the composition should be classified also in [E04B 1/94](#) and should receive classes for the compositions per se;

Details of fire-proof sealing of the connection of panels should additionally be classified in [E04B 1/948](#).

E04B 1/944

[N: covered with fire-proofing material]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Beam coverings	E04B 9/005
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E04B 1/947

[N: by closing openings in walls or the like in the case of fire (fire-proof doors E06B5/16)]

References relevant to classification in this group

This subclass/group does not cover:

Fire-proof doors	E06B 5/16
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E04B 1/948

[N: Fire-proof sealings or joints (for doors or windows E06B5/164)]

References relevant to classification in this group

This subclass/group does not cover:

Fire-proof sealings or joints for doors or windows	E06B 5/164
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E04B 1/98

against vibrations or shocks (on foundations E02D31/08); against mechanical destruction, e.g. by air-raids (against incendiary damage only E04B1/94; finishing work therefor E04F; buildings withstanding earth-quake or the like, shelters, arrangements of splintercatching walls E04H9/00)

Definition statement

This subclass/group covers:

Protection of buildings against vibrations or shocks originating from inside the building, e.g. an explosion within the building, or are caused by the wind or nearby construction works or traffic.

References relevant to classification in this group

This subclass/group does not cover:

Buildings adapted to withstand tornadoes	E04H 9/14
Protection against vibrations or shocks on foundations	E02D 31/08
Protection against incendiary damage only	E04B 1/94
Finishing work for protection against vibration, shocks, or mechanical damage	E04F
Buildings withstanding earth-quake or the like, shelters, arrangements of splintercatching walls	E04H 9/00
Buildings against air-raids or other	E04H 9/04

war-like actions	
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Pressure relieve panels in case of over-pressure	E06B 5/12 B65D 90/325 H02B 13/025 E06B 65/10C
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E04B 1/985

[N: involving active or passive dynamic mass damping systems]

Definition statement

This subclass/group covers:

Protection of buildings by reducing the movement of buildings, caused e.g. by wind or earthquakes, using mass-spring system, or systems where the masse is actively moved in opposite phase to the building movement, or tanks with liquid mass, with or without baffles for impeding liquid movement.

E04B 1/99

Room acoustics, i.e. forms of, or arrangements in, rooms for influencing or directing sound (E04B1/82 takes precedence; acoustics in general G10K11/00; electric signal processing for producing a reverberation or echo sound G10K15/08)

Definition statement

This subclass/group covers:

Arrangments for adjusting the acoustics of e.g. a concert hall

References relevant to classification in this group

This subclass/group does not cover:

Insulation specifically with respect to sound only	E04B 1/82
Acoustics in general	G10K 11/00
Electric signal processing for	G10K 15/08

producing a reverberation or echo sound	
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E04B 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 E04B1/38; insulation for buildings in general E04B1/62; building elements of relatively thin form for parts of buildings E04C2/00)

Definition statement

This subclass/group covers:

Load-bearing and non-load-bearing walls for buildings, wall construction with regard to insulation, and connections specially adapted to walls for buildings.

References relevant to classification in this group

This subclass/group does not cover:

Connections for building structures in general	E04B 1/38
Insulation for buildings in general	E04B 1/74
Building panels	E04C 2/00
Retaining walls	E02D 29/02

Special rules of classification within this group

Load-bearing walls made from panels are classified in [E04B 1/02](#) to [E04B 1/14](#).

Load-bearing or non-load-bearing walls built-up from layers of building elements, e.g. brick or block walls, are classified in [E04B 2/02](#) to [E04B 2/54](#).

Load-bearing walls having a framework or a pillarwork, and walls incorporating load-bearing elongated members, are classified in [E04B 2/56](#) to [E04B 2/709](#).

Non-load-bearing walls made of panels or posts and panels are classified in

[E04B 2/72](#) to [E04B 2/828](#).

Load-bearing or non-load-bearing walls made by casting, pouring or tamping in situ are classified in [E04B 2/84](#) to [E04B 2/8664](#).

E04B 2/02

built-up from layers of building elements;

Definition statement

This subclass/group covers:

Walls for buildings built-up from layers of building elements, e.g. brick or block walls, as well as building elements of block or brick shape for the construction of parts of buildings. The walls can be bearing walls or non-bearing walls, e.g. partition walls, and the building elements accordingly.

References relevant to classification in this group

This subclass/group does not cover:

Toys building blocks	A63H 33/04 to A63H 33/14
Positioning wedges	E04G 21/1841

Informative references

Attention is drawn to the following places, which may be of interest for search:

Details of connections of block or brick shaped building elements	E04B 2002/0202
Special features of block or brick shaped building elements	E04B 2002/0256
Retaining walls	E02D 29/02
Masonry wall ties, i.e. anchors	E04B 1/4178
Details of connections	E04B 2002/0202

Special rules of classification within this group

Building elements of block or brick shape, for the construction of parts of buildings, are classified in [E04B 2/02](#) to [E04B 2/54](#), even if they do not

explicitly form part of a wall.

Building elements of block or brick shape, for the construction of parts of buildings, and characterised by special adaptations, e.g. serving for locating conduits, for forming soffits, cornices or shelves, for fixing wall-plates or door-frames, for claustra, are classified in [E04C 1/39](#) to [E04C 1/397](#).

Building elements of block or brick shape, for the construction of parts of buildings, and being built-up from parts of different materials are classified in [E04C 1/40](#) to [E04C 1/41](#).

Building elements of glass or other transparent material, for the construction of parts of buildings, are classified in [E04C 1/42](#).

All aspects of the block or brick shaped building elements, e.g. special features, and details of connections among themselves, should be classified in [E04B 2/02](#) to [E04B 2002/0297](#).

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Block shape	block shape is not restricted to parallelepiped shape
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E04B 2/04

Walls having neither cavities between, nor in, the solid elements

Definition statement

This subclass/group covers:

Walls having neither cavities between, nor in, the solid building elements, as well as solid brick or block shape building elements having no cavities in them.

E04B 2/10

by filling material with or without reinforcements in small channels in, or in grooves between, the elements

Definition statement

This subclass/group covers:

Walls built-up from layers of solid building elements of brick or block shape, and having no cavities in the elements, wherein the joints, e.g. small channels

or grooves between the building elements and/or between the successive layers are filled with material, with or without additional reinforcements in the joints, small channels or grooves.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Separate spacers between building elements	E04B 2002/0282
Reinforcing elements of low bending resistance	E04C 5/02
Light-weight girders	E04C 5/065
Reinforcing elements of material other than metal	E04C 5/07

E04B 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

Definition statement

This subclass/group covers:

Walls built-up from layers of building elements of brick or block shape having cavities in, but not between, the building elements, as well as brick or block shape building elements having cavities in them.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Building elements of block shape, serving for ventilating, heating, cooling, and for locating conduits	E04C 1/392 , E04C 1/397
Building elements of brick or block shape with holes filled with insulating material	E04B 2002/0289

E04B 2/20

by filling material with or without reinforcements in small channels in, or in grooves between, the elements

Definition statement

This subclass/group covers:

Walls built-up from layers of building elements of brick or block shape, and having cavities in the elements, wherein the joints, e.g. small channels or grooves between the building elements and/or between the successive layers are filled with material, with or without additional reinforcements in the joints, small channels or grooves.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Separate spacers between building elements	E04B 2002/0282
Reinforcing elements of low bending resistance	E04C 5/02
Light-weight girders	E04C 5/065
Reinforcing elements of material other than metal	E04C 5/07

E04B 2/24

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

Informative references

Attention is drawn to the following places, which may be of interest for search:

Load-bearing walls of framework or pillarwork	E04B 2/56 - E04B 2/709
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E04B 2/26

the walls being characterised by fillings in all cavities in order to form a wall construction

Informative references

Attention is drawn to the following places, which may be of interest for search:

Walls made by casting, pouring, or tamping in situ, e.g. in permanent forms, but not by filling cavities in brick or block elements exclusively	E04B 2/84
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E04B 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

Definition statement

This subclass/group covers:

Walls made from layers of building elements of brick or block shape, the walls having cavities between, but not in, the elements, e.g. walls made of solid building elements having special profiles on their small side faces in order to create a cavity when connected with the adjacent elements;

Walls made from layers of building elements of brick or block shape, each consisting of two or more parts kept in distance, in a direction perpendicular to the wall, by means of spacers, all parts of the elements being solid.

E04B 2/30

using elements having specially designed means for stabilising the position; Spacers for cavity walls [N: (masonry wall ties E04B1/4178)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Details of connections	E04B 2002/0202
Masonry wall ties, i.e. anchors	E04B 1/4178

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Spacers for cavity walls	spacers between solid parts of brick or block shaped elements for building cavity walls, e.g. spacers integrated in a block consisting of two parallel solid slab shaped parts kept at a distance by the spacer
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E04B 2/34

by filling material with or without reinforcements in small channels in, or in grooves between, the elements

Definition statement

This subclass/group covers:

Walls made from layers of building elements of brick or block shape, the walls having cavities between, but not in, the elements, wherein the joints, e.g. small channels or grooves between the building elements and/or between the successive layers are filled with material, with or without additional reinforcements in the joints, small channels or grooves.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Separate spacers between building elements	E04B 2002/0282
Reinforcing elements of low bending resistance	E04C 5/02
Light-weight girders	E04C 5/065
Reinforcing elements of material other than metal	E04C 5/07

E04B 2/38

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

Informative references

Attention is drawn to the following places, which may be of interest for search:

Load-bearing walls of framework or pillarwork	E04B 2/56 - E04B 2/709
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E04B 2/40

the walls being characterised by fillings in all cavities in order to form a wall construction

Informative references

Attention is drawn to the following places, which may be of interest for search:

Walls made by casting, pouring, or tamping in situ, e.g. in permanent forms, but not by filling cavities in brick or block elements exclusively	E04B 2/84
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E04B 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**

Definition statement

This subclass/group covers:

Walls made from layers of building elements of brick or block shape, the walls having cavities between, as well as in the elements, e.g. walls made of building elements having cavities and having special profiles on their small side faces in order to create a cavity when connected with the adjacent elements;

Walls made from layers of building elements of brick or block shape, each consisting of two or more parts kept in distance, in a direction perpendicular to the wall, by means of spacers, at least one of the parts of the elements having cavities.

E04B 2/44

using elements having specially-designed means for stabilizing the position; Spacers for cavity walls [N: (masonry wall ties E04B1/4178)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Details of connections	E04B 2002/0202
Masonry wall ties, i.e. anchors	E04B 1/4178

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Spacers for cavity walls	spacers between parts of brick or block shaped elements for building cavity walls, at least one of the parts having cavities, e.g. spacers integrated in a block consisting of two parallel, non-massive, slab shaped parts kept at a distance by the spacer
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E04B 2/48

by filling material with or without reinforcements in small channels in, or in grooves between, the elements

Definition statement

This subclass/group covers:

Walls made from layers of building elements of brick or block shape, the walls having cavities between, as well as in the elements, wherein the joints, e.g. small channels or grooves between the building elements and/or between the successive layers are filled with material, with or without additional reinforcements in the joints, small channels or grooves.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Separate spacers between building elements	E04B 2002/0282
Reinforcing elements of low bending resistance	E04C 5/02
Light-weight girders	E04C 5/065

Reinforcing elements of material other than metal	E04C 5/07
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E04B 2/52

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

Informative references

Attention is drawn to the following places, which may be of interest for search:

Load-bearing walls of framework or pillarwork	E04B 2/56 - E04B 2/709
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E04B 2/54

the walls being characterised by fillings in all cavities in order to form a wall construction

Informative references

Attention is drawn to the following places, which may be of interest for search:

Walls made by casting, pouring, or tamping in situ, e.g. in permanent forms, but not by filling cavities in brick or block elements exclusively	E04B 2/84
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E04B 2/56

[N: Load-bearing] walls of framework or pillarwork; Walls incorporating load-bearing elongated members]

References relevant to classification in this subclass/group

This subclass/group does not cover:

Removable non-load-bearing partitions; Partitions with a free upper edge	E04B 2/74
Curtain walls	E04B 2/88

Pillars	E04C 3/30
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E04B 2/562

[N: with fillings between the load-bearing elongated members]

Definition statement

This subclass/group covers:

Nogging of half-timbered walls.

E04B 2/62

the members being formed of two or more elements in side-by-side relationship

Informative references

Attention is drawn to the following places, which may be of interest for search:

Framework with metallic elongated load-supporting parts formed of a number of parallel profiles	E04B 2001/2472
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E04B 2/68

made by filling-up wall cavities

References relevant to classification in this group

This subclass/group does not cover:

Walls having cavities in, but not between, the elements, the walls being characterised by fillings in some of the cavities forming load-bearing pillars or beams	E04B 2/24
Walls having cavities between, but not in, the elements, the walls being characterised by fillings in some of the cavities forming load-bearing pillars or beams	E04B 2/38
Walls having cavities between, as	E04B 2/52

well as in, the elements, the walls being characterised by fillings in some of the cavities forming load-bearing pillars or beams	
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E04B 2/701

[N: with integrated supporting and obturation function]

Definition statement

This subclass/group covers:

Walls made from horizontally laid logs or beams, e.g. log cabins.

E04B 2/702

[N: with longitudinal horizontal elements]

References relevant to classification in this group

This subclass/group does not cover:

Walls incorporating load-bearing elongated members of wood, with longitudinal horizontal elements shorter than the length of a wall	E04B 2/704
Walls incorporating load-bearing elongated members of wood, with longitudinal horizontal elements placed between columns	E04B 2/705

E04B 2/706

[N: with supporting function]

Definition statement

This subclass/group covers:

Walls comprising structural wooden studs or posts with non structural closure elements en-between, e.g. structural stud walls and shear bracing therefor.

References relevant to classification in this group

This subclass/group does not cover:

Half-timbering	E04B 2/562
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E04B 2/72

**[N: Non-load-bearing] walls of elements of relatively thin form
[N: with respect to the thickness of the wall]**

Definition statement

This subclass/group covers:

Non-load-bearing thin walls without studs or posts, with profiled or folded panels or trays.

References relevant to classification in this subclass/group

This subclass/group does not cover:

Non-structural stud walls	E04B 2/7453
Load-bearing] walls of framework or pillarwork; Walls incorporating load-bearing elongated members	E04B 2/56
Removable non-load-bearing partitions; Partitions with a free upper edge	E04B 2/74
Curtain walls	E04B 2/88
Non-load-bearing walls of elements of relatively thin form with joint fillings acting as framework or pillars	E04B 2/68
Building elements of relatively thin form for the construction of parts of buildings, e.g. sheet materials, slabs, or panels	E04C 2/00

Special rules of classification within this group

Use [E04B 2002/725](#) to [E04B 2002/728](#) as additional information for the documents of [E04B 2/72](#).

E04B 2/723

[N: constituted of gypsum elements]

Definition statement

This subclass/group covers:

Non-load-bearing thin walls with folded plasterboard or gypsum or plaster projected onto a lattice.

Special rules of classification within this group

Use [E04B 2/845](#) as additional information for the documents of [E04B 2/723](#).

E04B 2/74

Removable non-load-bearing partitions; Partitions with a free upper edge; [N: modular coordination]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Framed panels	E04C 2/38
Screens, e.g. for an auscultation room	A47G 5/00
Electric wiring	H01R

Special rules of classification within this group

Documents with tables, shelving and similar items associated with a partition wall should be circulated be additionally be classified in furniture classes, e.g. [A47B](#) for tables or desks.

E04B 2/7407

[N: assembled using frames with infill panels or coverings only; made-up of panels and a support structure incorporating posts]

References relevant to classification in this group

This subclass/group does not cover:

Removable non-load-bearing	E04B 2/78
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partitions or partitions with a free upper edge with framework or posts of metal characterised by special cross-section of the frame-members	
Removable non-load-bearing partitions or partitions with a free upper edge with framework or posts of wood	E04B 2/80

Special rules of classification within this group

Use [E04B 2/7409](#) to [E04B 2002/7498](#) as additional information for the documents of [E04B 2/7407](#) to [E04B 2/7459](#).

E04B 2/7425

[N: Details of connection of panels]

References relevant to classification in this group

This subclass/group does not cover:

Partitions with a free upper edge with separate framed panels without intermediary support posts and with adjustable angular connection of panels	E04B 2/7427
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E04B 2/7435

[N: Glazing details]

Special rules of classification within this group

Use [E04B 2/7437](#) to [E04B 2/7444](#) as additional information for the documents of [E04B 2/7435](#).

E04B 2/7437

[N: with panels hooked onto posts]

Definition statement

This subclass/group covers:

Non-load-bearing partition with free upper edge and panels hooked onto posts, e.g. with additional securing elements to prevent its unhooking.

References relevant to classification in this group

This subclass/group does not cover:

Partitions with a free upper edge with panels with support posts and with adjustable angular connection of panels to posts	E04B 2/74E3
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E04B 2/7442

[N: hinged connections]

References relevant to classification in this group

This subclass/group does not cover:

Partitions with a free upper edge with panels with support posts and with panels hooked onto the rim or in a groove of circular posts	E04B 2/74E3C
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E04B 2/745

[N: Glazing details]

Special rules of classification within this group

Use [E04B 2/7451](#) as additional information for the documents of [E04B 2/745](#).

E04B 2/7455

[N: Glazing details]

Special rules of classification within this group

Use [E04B 2/7457](#) to [E04B 2/7459](#) as additional information for the documents of [E04B 2/7455](#).

E04B 2/7457

[N: with wallboards attached to the outer faces of the posts,

parallel to the partition]

References relevant to classification in this group

This subclass/group does not cover:

Removable non-load-bearing partitions with panels and support posts, extending from floor to ceiling, the posts being telescoping to compensate for floor or ceiling irregularities	E04B 2/7459
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E04B 2/76

with framework or posts of metal

Definition statement

This subclass/group covers:

Connections of horizontal and vertical metallic frame members.

References relevant to classification in this group

This subclass/group does not cover:

Details of connections, thresholds or skirtings	E04B 2/82
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Mitre joints for windows, doors	E06B 3/96
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E04B 2/78

characterised by special cross-section of the frame-members[N: as far as important for securing wall panels to a framework with or without the help of cover-strips]

References relevant to classification in this group

This subclass/group does not cover:

Separate connecting means, e.g. clip	E04B 2/74
Connections between uprights and cross-members	E04B 2/76

E04B 2/82

characterised by the manner in which edges are connected to the building; Means therefor; Special details of easily-removable partitions [N: as far as related to the connection with other parts of the building]

References relevant to classification in this group

This subclass/group does not cover:

Means for connecting partition walls or panels to the ceilings	E04B 9/008
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E04B 2/825

[N: the connection between the floor and the ceiling being achieved without any restraining forces acting in the plane of the partition]

References relevant to classification in this group

This subclass/group does not cover:

Removable non-load-bearing partitions with panels and support posts, extending from floor to ceiling, the posts being telescoping to compensate for floor or ceiling irregularities	E04B 2/7459
Connections between wall studs and upper or lower locating rails allowing vertical movement of upper rail with respect to the stud, e.g. by using slots in the rail or stud	E04B 2/768

E04B 2/827

[N: Partitions constituted of sliding panels]

Definition statement

This subclass/group covers:

Non-load-bearing partitions constituted of sliding panels, where the sliding occurs in a direction parallel or perpendicular to the plane of the partition

Informative references

Attention is drawn to the following places, which may be of interest for search:

Suspension arrangements for sliding wings of doors	E05D 15/06
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E04B 2/84

Walls made by casting, pouring, or tamping in situ

References relevant to classification in this group

This subclass/group does not cover:

Walls built-up from layers of building elements	E04B 2/02
Load-bearing walls of framework or pillarwork ; Walls incorporating load-bearing elongated members	E04B 2/56
Reusable forms for walls made by casting, pouring, or tamping in situ	E04G 11/06
Working of concrete or similar masses able to be cast or poured in situ	E04G 21/02

Special rules of classification within this group

Documents where the filling does not contain a hardenable binder, e.g. rammed earth or loose rocks, are classified in [E04B 2/84](#).

E04B 2/86

made in permanent forms

Special rules of classification within this group

Use [E04B 2002/867](#) to [E04B 2002/8694](#) as additional information for the documents of [E04B 2/86](#) to [E04B 2/8652](#).

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

A "tie" holds the two opposite leaves of the form together.

A "spacer" keeps the two opposite leaves at a predetermined distance from each other.

A single element can but must not have both functions: i.e. a tie can be a spacer or not, a spacer can be a tie or not.

E04B 2/8635

[N: with ties attached to the inner faces of the forms]

References relevant to classification in this group

This subclass/group does not cover:

Walls made by casting, pouring, or tamping in situ in permanent forms with spacers being embedded in at least one form leaf	E04B 2/8611
Walls made by casting, pouring, or tamping in situ in permanent forms with spacers and at least one form leaf being monolithic	E04B 2/8623

E04B 2/8641

[N: using dovetail-type connections]

Definition statement

This subclass/group covers:

Connections with dovetail or "T"-shaped grooves in the inner face of the form or the spacer

E04B 2/8647

[N: with ties going through the forms]

Definition statement

This subclass/group covers:

Ties going through the form, e.g. nails or screws going through the forms into the spacers.

E04B 2/88

Curtain walls

References relevant to classification in this group

This subclass/group does not cover:

Fixing of glass panes	E06B 3/54
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Measures for draining-off condensed water or water leaking in windows	E06B 7/14
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Special rules of classification within this group

Curtain walls in combination with ventilation , heating, drainage, shading, adjustable supports are classified in [E04B 2/88](#);

Drainage details should additionally be classified in [E06B 7/14](#).

E04B 2/885

[N: comprising a supporting structure for flush mounted glazing panels]

References relevant to classification in this group

This subclass/group does not cover:

Connectors for fixing the flush mounted glazing to the supporting structure	E06B 3/54
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E04B 2/90

comprising panels directly attached to the structure

Definition statement

This subclass/group covers:

Panels directly attached to the structure, the panel comprising a frame or not

References relevant to classification in this group

This subclass/group does not cover:

Curtain walls comprising a supporting structure for flush mounted glazing panels	E04B 2/885
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E04B 2/94

Concrete panels

References relevant to classification in this group

This subclass/group does not cover:

Curtain walls with sandwich-type panels	E04B 2/92
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E04B 2/96

comprising panels attached to the structure through mullions or transoms

Definition statement

This subclass/group covers:

Panels attached with panel clamping bars to the mullions or the transoms.

References relevant to classification in this group

This subclass/group does not cover:

Flush mounted glazing, the panels	E06B 3/54
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being attached without clamping bars to mullions or transoms	
Glass roofs	E04D 3/06
Curtain walls comprising a supporting structure for flush mounted glazing panels	E04B 2/885

E04B 2/965

[N: Connections of mullions and transoms]

Special rules of classification within this group

Documents with details of connections of mullions to mullions, with details of connections of mullions or transoms to the supporting structure, or with details of the infill panels are classified in [E04B 2/96](#), even if they show details of the connections of mullions and transoms.

Documents with details of angles or corners of the curtain walls are classified in [E04B 2/962](#), even if they show details of the connections of mullions and transoms.

E04B 2/967

[N: Details of the cross-section of the mullions or transoms]

Special rules of classification within this group

Are classified in [E04B 2/967](#) documents which show only details of the cross-section of the mullions or transoms .

Documents with details of connections of mullions to mullions, of connections mullions or transoms, or with details of the infill panels, or with details of angles or corners of the curtain walls are classified in [E04B 2/96](#), [E04B 2/962](#) or [E04B 2/965](#), even if they show details of the cross-section of the mullions or transoms.

E04B 5/00

Floors; Floor construction with regard to insulation; Connections specially adapted therefor (elements for floors, e.g. bricks, stones, filling bodies, girders, E04C; flooring as finishing work, insulation of flooring, sectional false floors, e.g. for computers E04F15/00)

Definition statement

This subclass/group covers:

Structural floors for buildings; Building floors construction in general and with regard to insulation; Connections specially adapted to floors.

References relevant to classification in this group

This subclass/group does not cover:

Girders for floors	E04C 3/00
Flooring as finishing work, insulation of flooring, sectional false floors, e.g. for computers	E04F 15/00
Decks, e.g. garden decks	E04F 15/00
Flat foundations, floors resting on the ground	E02D 27/00
Disposable shutterings, forms for floors	E04G
Producing slab shaped elements of concrete in moulds	B28B
Decks for ships	B63B 3/48

Informative references

Attention is drawn to the following places, which may be of interest for search:

Building insulation in general; Heat and sound insulation for buildings	E04B 1/62 , E04B 1/74
Connections for building structures in general	E04B 1/38
Buildings for parking cars	E04H 6/00

E04B 5/02

Load-carrying floor structures formed substantially of

prefabricated units (E04B5/43 to E04B5/48 TAKE precedence; floors merely characterised by the filling members E04C1/34) [N: self-supporting floor-slabs E04C2/50]

References relevant to classification in this group

This subclass/group does not cover:

Decks, e.g. garden decks	E04F 15/00
Sectional false floors	E04F 15/024

Informative references

Attention is drawn to the following places, which may be of interest for search:

Floor structures of extraordinary design	E04B 5/43
Special adaptation of floors for transmission of light	E04B 5/46
Special adaptation of floors for incorporating ducts	E04B 5/48

E04B 5/026

[N: with beams or slabs of plastic]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Beams of plastics	E04C 3/28
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E04B 5/04

with beams [N: or slabs] of concrete or other stone-like material, e.g. asbestos cement (E04B5/08, E04B5/14 take precedence)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Load carrying floor structures formed substantially of prefabricated units, with beams or girders laid in two directions	E04B 5/14
Load carrying floor structures formed substantially of prefabricated units, and assembled of block shaped elements	E04B 5/08

Special rules of classification within this group

Load-carrying floor structures consisting of prefabricated slabs of concrete or other stone like material are classified in [E04B 5/04](#), except floor structures consisting of hollow core slabs which are classified in [E04B 5/043](#).

E04B 5/043

[N: having elongated hollow cores]

Definition statement

This subclass/group covers:

Load-carrying floor structures consisting of elongated hollow cores slabs, e.g. placed against one another.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Load-carrying floor structures partly cast in situ with prefabricated or partly prefabricated beams and one or more hollow cores between the beams	E04B 5/265
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Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Hollow core slab	Hollow core slab is a precast slab of prestressed concrete, having tubular voids extending the full length of the slab
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E04B 5/046

[N: with beams placed with distance from another]

Definition statement

This subclass/group covers:

Load-carrying floor structures formed of prefabricated beams placed with distance from one another, the space between the beams being filled or covered by prefabricated elements and eventually completed by non-structural layers of concrete or mortar..

References relevant to classification in this group

This subclass/group does not cover:

Load-carrying floor structures partly cast in situ with prefabricated stiffening ribs	E04B 5/23 - E04B 5/29
Load carrying floor structures formed substantially of prefabricated units, and assembled of block shaped elements	E04B 5/08

E04B 5/06

[N: with beams] placed against one another [N: optionally with pointing-mortar]

References relevant to classification in this group

This subclass/group does not cover:

Load-carrying floor structures consisting of elongated slabs placed against one another	E04B 5/04
Load-carrying floor structures consisting of elongated hollow cores slabs placed against one another	E04B 5/043

E04B 5/08

assembled of block-shaped elements, e.g. hollow stones
(E04B5/14 takes precedence; floors composed of reinforced
brickwork E04B5/44)

Definition statement

This subclass/group covers:

Load carrying floor structures assembled of prefabricated block-shaped elements, e.g. joined together by mortar, tensioning or connecting elements.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Load carrying floor structures formed substantially of prefabricated units, with beams or girders laid in two directions	E04B 5/14
Floors composed of reinforced brickwork	E04B 5/44

E04B 5/10

with metal beams or girders, e.g. with steel lattice girders
(E04B5/14 takes precedence)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Load carrying floor structures formed substantially of prefabricated units, with beams or girders laid in two directions	E04B 5/14
Metal beams or girders	E04C 3/04
Light-weight girders as reinforcing elements	E04C 5/065

E04B 5/12

with wooden beams (E04B5/14 takes precedence) [N: also means for supporting beams; (shores or struts E04G25/00)]

References relevant to classification in this group

This subclass/group does not cover:

Shores or struts	E04G 25/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Load carrying floor structures formed substantially of prefabricated units, with beams or girders laid in two directions	E04B 5/14
Wooden beams	E04C 3/12
Wooden joists hangers	E04B 1/2612

E04B 5/16

Load-carrying floor structures wholly or partly cast or similarly formed in situ (E04B5/43 to E04B5/48 take precedence; floors merely characterised by the prefabricated elements E04C)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Floor structures of extraordinary design	E04B 5/43
Floors composed of stones, mortar and reinforcing elements	E04B 5/44
Special adaptation of floors for transmission of light	E04B 5/46
Special adaptation of floors for incorporating ducts	E04B 5/48

Forms or shutterings for making floors	E04G 11/00
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E04B 5/17

Floor structures partly formed in situ

Definition statement

This subclass/group covers:

Floor structures partly formed in situ, i.e. in which at least some parts of the structure are prefabricated, e.g. precast girders or prefabricated filling members between the beams.

References relevant to classification in this group

This subclass/group does not cover:

Floor structures cast in situ with form units as part of the floor; with slab shaped form units acting as reinforcement	E04B 5/36 , E04B 5/38
Floor structures cast in situ with hollow cylindrical or spherical filling elements	E04B 5/32

E04B 5/18

with stiffening ribs or other beam-like formations wholly cast between the filling members

Definition statement

This subclass/group covers:

Floor structures partly formed in situ, with prefabricated filling members and with stiffening ribs wholly cast between or in the prefabricated filling members; Prefabricated filling elements suitable for casting stiffening ribs between or in them.

E04B 5/19

the filling members acting as self-supporting permanent forms (E04B5/21 takes precedence)

Definition statement

This subclass/group covers:

Floor structures partly formed in situ, with prefabricated self-supporting filling members and with stiffening ribs wholly cast between or in the prefabricated self-supporting filling members, e.g. elongated self-supporting filling members resting on the walls.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Load-carrying floor structures consisting of slabs	E04B 5/04
Load-carrying floor structures consisting of hollow cores slabs	E04B 5/043
Load-carrying floor structures partly cast in situ with prefabricated or partly prefabricated beams and one or more hollow cores between the beams	E04B 5/265
Floor structures partly formed in situ, with prefabricated filling members and with stiffening ribs wholly cast between or in the prefabricated filling members, and extending in two different directions	E04B 5/21

E04B 5/21

Cross-ribbed floors

Definition statement

This subclass/group covers:

Floor structures partly formed in situ, with prefabricated filling members and with stiffening ribs wholly cast between or in the prefabricated filling members, and extending in two different and intersecting directions. Prefabricated filling elements suitable for casting cross-ribbed floors.

E04B 5/23

with stiffening ribs or other beam-like formations wholly or partly prefabricated (with all load-carrying parts substantially

consisting of prefabricated units E04B5/02) [N: beams built-up by elements joined in line E04C3/22]

Definition statement

This subclass/group covers:

Floor structures partly formed in situ, with prefabricated or partly prefabricated beam-like formations, e.g. prefabricated beams of concrete, metal or wood.

References relevant to classification in this group

This subclass/group does not cover:

With all load-carrying parts substantially consisting of prefabricated units	E04B 5/02
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Provisions for connecting wooden stiffening ribs to the concrete slab	E04B 2005/232
Beams built-up by elements joined in line	E04C 3/22

E04B 5/26

with filling members between the beams (E04B5/28 takes precedence)

Definition statement

This subclass/group covers:

Floor structures partly formed in situ, with prefabricated or partly prefabricated beam-like formations and with prefabricated filling members between the beams;

Prefabricated elements for use as filling elements between prefabricated or partly prefabricated beams.

E04B 5/261

[N: Monolithic filling members]

Definition statement

This subclass/group covers:

Floor structures partly formed in situ, with prefabricated or partly prefabricated beam-like formations and with prefabricated monolithic filling members between the beams;

Prefabricated monolithic elements for use as filling elements between prefabricated or partly prefabricated beams.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Monolithic	In one piece
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E04B 5/263

[N: with a flat lower surface (E04B5/265 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Load-carrying floor structures partly cast in situ with prefabricated or partly prefabricated beams and one or more hollow cores between the beams	E04B 5/265
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E04B 5/265

[N: with one or more hollow cores]

Definition statement

This subclass/group covers:

Load-carrying floor structures partly cast in situ with prefabricated or partly prefabricated beams and one or more hollow cores between the beams

Informative references

Attention is drawn to the following places, which may be of interest for search:

Load-carrying floor structures consisting of hollow cores slabs only	E04B 5/043
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E04B 5/28

Cross-ribbed floors

Definition statement

This subclass/group covers:

Floor structures partly formed in situ, with prefabricated or partly prefabricated beam-like formations and with prefabricated filling members between the beams;

Prefabricated elements for use as filling elements between prefabricated or partly prefabricated beams in a cross-ribbed floor.

E04B 5/29

the prefabricated parts of the beams consisting wholly of metal (E04B5/28 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Beams, as independent entities, consisting of steel and concrete	E04C 3/293
Beams, as independent entities, consisting of concrete combined with a girder-like steel structure extending laterally outside the element	E04C 3/294

Informative references

Attention is drawn to the following places, which may be of interest for search:

Metal beams or girders	E04C 3/04
Light-weight metal girders used as reinforcement, e.g. with a precast concrete part	E04C 3/065

E04B 5/32

Floor structures wholly cast in situ with or without form units or reinforcements

Informative references

Attention is drawn to the following places, which may be of interest for search:

Forms or shutterings for making floors	E04G 11/00
Floor structures having permanent form for the floor edges	E04B 2005/322
Means preventing cold bridging at the junction of external walls with a floor	E04B 2001/7679
Floor structures having peripheral anchors or supports	E04B 2005/324

Special rules of classification within this group

Floor structures cast in situ with hollow cylindrical or spherical filling elements are classified in [E04B 5/32](#).

Floor structures cast in situ with a metal form-slab are classified in [E04B 5/40](#).

E04B 5/36

with form units as part of the floor

Definition statement

This subclass/group covers:

Floor structures wholly cast in situ with form units as part of the floor, the form units being either made in one piece or made of different elements, e.g. non-self-supporting form units.

References relevant to classification in this group

This subclass/group does not cover:

Sectional false floors	E04F 15/024
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Special rules of classification within this group

Non-self-supporting floor form units, either made of one element or of a series

of elements, are classified in [E04B 5/36](#), except in case of metal form-slabs.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Floor form unit	A form, either made of one element or of a series of elements, that allows the floor to be cast over it, in situ, without the need of additional forms.
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E04B 5/38

with slab-shaped form units acting simultaneously as reinforcement; Form slabs with reinforcements extending laterally outside the element [N: beams placed against one another and acting as permanent forms E04B5/23]

Definition statement

This subclass/group covers:

Floor structures wholly cast in situ with slab-shaped substantially self-supporting form units acting simultaneously as reinforcement;

Form slabs with reinforcements of metal or other material extending laterally outside the form slab, and that are suitable to be embedded in the concrete of the floor slab to be cast in-situ, e.g. "Predalles" concrete slabs or semi-finished reinforced concrete slabs.

E04B 5/40

with metal form-slabs

Definition statement

This subclass/group covers:

Floor structures wholly cast in situ with metal form-slabs, e.g. with corrugated or non-corrugated metal form-slabs.

E04B 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 ([N: anchoring devices for balconies with means for preventing cold bridging

E04B1/0038]; extraordinary constructions in general E04B1/34)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Shear reinforcements, e.g. shear heads for floor slabs	E04C 5/0645
Anchoring devices for balconies with means for preventing cold bridging	E04B 1/0038
Extraordinary constructions in general	E04B 1/34
Buildings adapted to withstand abnormal external influences, e.g. earthquakes	E04H 9/00

E04B 5/44

Floors composed of stones, mortar, and reinforcing elements (with inserts of glass E04B5/46)

Definition statement

This subclass/group covers:

Floors composed of stones, e.g. hollow bricks, mortar and reinforcing elements.

References relevant to classification in this group

This subclass/group does not cover:

Special adaptation of floors for transmission of light, e.g. by inserts of glass	E04B 5/46
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Load carrying floor structures assembled of prefabricated block-shaped elements	E04B 5/08
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Beams built-up by elements joined in line	E04C 3/22
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Special rules of classification within this group

Floor structures assembled of relatively large prefabricated block-shaped elements and relatively little mortar or concrete are classified in [E04B 5/08](#).

E04B 5/46

Special adaptation of floors for transmission of light, e.g. by inserts of glass (of ceilings E04B9/32, block-shaped elements E04C1/42; slab- or sheet-shaped elements E04C2/54; for roof covering E04D3/06)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Translucent ceilings	E04B 9/32
Block-shaped building elements of glass or transparent material	E04C 1/42
Slab-like translucent building elements	E04C 2/54
Roof coverings of glass or other translucent materials	E04D 3/06 , E04D 3/28

E04B 5/48

Special adaptations of floors for incorporating ducts, e.g. for heating or ventilating (in block-shaped elements E04C1/39; in slab- or sheet-shaped elements E04C2/52)

Definition statement

This subclass/group covers:

Special adaptations of floors for incorporating ducts, e.g. for heating or ventilating, in the structural body of the floor.

References relevant to classification in this group

This subclass/group does not cover:

Sectional false floors	E04F 15/024
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Building elements of block shape serving for locating conduits	E04C 1/39
Building elements of slab shape serving for locating conduits	E04C 2/52
Installation of electric cables in floors	H02G 3/283
Ventilation with air supply through perforated floors	F24F 7/10
Hot-water central heating systems	F24D 3/00

E04B 7/00

Roofs; Roof construction with regard to insulation (structures for roofs as well as for floors E04B5/00; ceilings E04B9/00; greenhouses A01G9/14; large containers having floating covers B65D88/34; self-supporting roof slabs E04C2/50; roof trusses, trusslike structures, joists E04C3/02 ; roof covering E04D)

Definition statement

This subclass/group covers:

Roofs, i.e. roof structures; Roof construction with regard to insulation, e.g. self-supporting insulated roof-slabs.

References relevant to classification in this group

This subclass/group does not cover:

Roof coverings	E04D
Roof covering insulation and roofs	E04D 13/16

with insulation integrated in and around purlins and rafters	
Structures for roofs, in particular for flat roofs, as well as for floors	E04B 5/00
Ceilings, i.e. suspended ceilings	E04B 9/00
Roof trusses per se, trusslike structures	E04C 3/02 - E04C 3/394
Arched girders or portal frames	E04C 3/38 - E04C 3/46
Three-dimensional frameworks	E04B 1/19
Tents or canopies, in general	E04F 15/00
Sunshades; Awnings	E04F 10/00
Large containers having floating covers	B65D 88/34

Informative references

Attention is drawn to the following places, which may be of interest for search:

Buildings or structures for particular purposes, e.g. bus shelters, swimming pools; coverings thereof	E04H
Arched structures; Vaulted structures; Folded structures	E04B 1/32
Extraordinary structures; Structures covering a large free area; Structures characterised by movable, separable or collapsible parts; Structures composed of box-like or cell-like units	E04B 1/34 , E04B 1/342 , E04B 1/343 , E04B 1/348

E04B 7/02

with plane sloping surfaces, e.g. saddle roofs [N: (canopies E04F10/00)] (E04B7/12 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Canopies	E04F 10/00
Roofs formed in bays, e.g. saw-tooth roofs	E04B 7/12

E04B 7/022

[N: consisting of a plurality of parallel similar trusses or portal frames]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Roof trusses per se, trusslike structures	E04C 3/02 - E04C 3/394
Arched girders or portal frames	E04C 3/38 - E04C 3/46

E04B 7/024

[N: the trusses or frames supporting load-bearing purlins, e.g. braced purlins (battens, supports for battens E04D12/00)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Roof battens; supports for roof battens	E04D 12/004
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Synonyms and Keywords

In patent documents the following expressions/words " Purlins " and "Battens" are often used as synonyms.

E04B 7/026

[N: consisting of prefabricated modules, e.g. box-like or

cell-like units (E04B7/24 takes precedence)]

Definition statement

This subclass/group covers:

Roof consisting of prefabricated modules, e.g. box-like or cell-like units, the prefabricated modules arriving in situ ready to be put in place as they are.

References relevant to classification in this group

This subclass/group does not cover:

Roofs consisting of self-supporting slabs, the slabs being collapsible or retractable, e.g. for transport	E04B 7/24
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Structures composed of box-like or cell-like units	E04B 1/348
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E04B 7/028

[N: consisting of structures of pyramidal or conical shape]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Small buildings erected in the open air, e.g. waiting shelters, kiosks, beach cabins, public WC's	E04H 1/1205
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E04B 7/04

supported by horizontal beams or the equivalent resting on the walls (E04B7/06 takes precedence)

Definition statement

This subclass/group covers:

Details of connections between the roof structure and the supporting walls, for

roofs in which the roof structure is supported by the walls, e.g. roof trusses supported by horizontal beams resting on the walls.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Constructions of roof intersections or hipped ends	E04B 7/06
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E04B 7/045

[N: with connectors made of sheet metal for connecting the roof structure to the supporting wall (connectors made of sheet metal for wooden elongated load-supporting elements in general E04B1/2608)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Connectors made of sheet metal for wooden elongated load supporting elements in general	E04B 1/2608
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E04B 7/06

Constructions of roof intersections or hipped ends

Informative references

Attention is drawn to the following places, which may be of interest for search:

Mutual connections of metal glazing bars	E04D 2003/0868
Greenhouses	A01G 9/14

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Hipped end	The ridge end or node defined by the
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	junction of three or more triangular sloping faces in a hip roof
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E04B 7/063

[N: Hipped ends]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Mutual connections of metal glazing bars on the ridge of the roof	E04D 2003/0875
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E04B 7/08

Vaulted roofs (E04B7/14 takes precedence; vaulted structures in general E04B1/32; inflatable tents or canopies, in general E04H15/20; inflatable forms for shaping in situ E04G11/04)

Definition statement

This subclass/group covers:

Vaulted roofs, i.e. roofs having a general curved shape, in one or more directions, e.g. an arched shape, an hyperbolic-parabolic shape, a dome shape, a curved and folded shape.

References relevant to classification in this group

This subclass/group does not cover:

Suspended roofs	E04B 7/14
Inflatable tents or canopies, in general	E04H 15/20

Informative references

Attention is drawn to the following places, which may be of interest for search:

Saw-tooth roofs	E04B 7/12
Vaulted structures in general	E04B 1/32

Inflatable forms for shaping in situ	E04G 11/04
Extraordinary structures; Structures covering a large free area	E04B 1/34 , E04B 1/342

Special rules of classification within this group

Barrel vaulted roofs are classified in [E04C 3/08](#). Folded barrel vaulted roofs are classified in [E04B 7/107](#).

E04B 7/10

Shell structures, e.g. of hyperbolic-parabolic shape; Grid-like formations acting as shell structures; Folded structures [N: buildings E04B1/32]

Definition statement

This subclass/group covers:

Curved roof structures made by shell structures, e.g. roof structures of hyperbolic-parabolic shape made of a thin-shell concrete membrane, or by a plurality of thin-shell units connected together;

Curved roof structures made by grid-like formations acting as shell structures, i.e. thin and substantially self-supporting, that is without the need of intermediate supports;

Curved roof structures made by a folded structure, e.g. globally curved roof structures made by concertina-like folded metal sheets.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arched buildings structures; Vaulted buildings structures; Folded buildings structures	E04B 1/32
Three-dimensional frameworks	E04B 1/19
Saw-tooth roofs	E04B 7/12

E04B 7/102

[N: Shell structures]

Definition statement

This subclass/group covers:

Curved roof structures made by shell structures, e.g. roof structures of hyperbolic-parabolic shape made of a thin-shell concrete membrane, or by a plurality of thin-shell units connected together.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Inflatable forms for shaping in situ	E04G 11/04
Arched structures comprised entirely of a single panel	E04B 2001/3258
Arched structures comprised of a number of panels connected together	E04B 2001/327
Bending sheet metal	B21D 5/00

E04B 7/105

[N: Grid-like structures]

Definition statement

This subclass/group covers:

Curved roof structures made by grid-like formations acting as shell structures, i.e. thin and substantially self-supporting, that is without the need of intermediate supports.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arched structures having a grid frame	E04B 2001/3235
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E04B 7/107

[N: Folded structures]

Definition statement

This subclass/group covers:

Curved roof structures made by a folded structure, e.g. globally curved roof structures made by concertina-like folded metal sheets.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Saw-tooth roofs	E04B 7/12
Arched structures with faceted surfaces	E04B 2001/3294
Structures deriving their rigidity from concertina folds	E04B 1/34378
Corrugating sheet metal	B21D 13/00

E04B 7/12

formed in bays, e.g. saw-tooth roofs (E04B7/10 takes precedence)

Definition statement

This subclass/group covers:

Roofs formed in bays, e.g. massive saw-tooth roofs for factory buildings.

References relevant to classification in this group

This subclass/group does not cover:

Curved roof structures made by a folded structure, e.g. globally curved roof structures made by concertina-like folded metal sheets	E04B 7/107
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E04B 7/14

Suspended roofs (suspended tents or canopies in general E04H15/04)

Definition statement

This subclass/group covers:

Suspended roofs, i.e. permanent roofs suspended from a structure, e.g. a roof for a stadium consisting of a membrane suspended by cables, or a roof for a building consisting of a membrane being anchored along its borders on the walls of the building.

References relevant to classification in this group

This subclass/group does not cover:

Suspended tents or canopies in general	E04H 15/04
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Extraordinary structures; Structures covering a large free area	E04B 1/34 , E04B 1/342
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E04B 7/16

Roof structures with movable roof parts (buildings for special purposes E04H)

References relevant to classification in this group

This subclass/group does not cover:

Skylights or domes having movable parts	E04D 13/035
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Buildings for special purposes	E04H
Structures characterised by movable, separable or collapsible parts	E04B 1/343

E04B 7/163

[N: characterised by a pivoting movement of the movable roof parts (E04B7/166 takes precedence)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Roof structures with movable parts characterised by a translation movement	E04B 7/166
Skylights having movable parts pivoting about a fixed axis	E04D 13/0351

E04B 7/166

[N: characterised by a translation movement of the movable roof part, with or without additional movements]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Roof structures with movable parts characterised by a pivoting movement	E04B 7/163
Skylights having movable parts moving in their own plane	E04D 13/0358

E04B 7/18

Special structures in or on roofs, e.g. dormer windows (in connection with roof coverings E04D13/00, especially domes E04D13/03)

References relevant to classification in this group

This subclass/group does not cover:

Special structures on roofs, in connection with roof coverings	E04D 13/00
Skylights and domes	E04D 13/03

Chimneys	E04F 17/00
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Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Dormer window	Roof window set in a structure that is protruding from the surface of a sloping roof; the window itself is substantially vertical
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E04B 7/20

Roofs consisting of self-supporting slabs, e.g. able to be loaded

Definition statement

This subclass/group covers:

Roofs consisting of self-supporting slabs, e.g. a saddle roof in which each plane sloping surface is made by a series of adjacent self-supporting slabs resting only on the walls of the building and on the ridge beam of the roof.

References relevant to classification in this group

This subclass/group does not cover:

Waterproof roofing slabs comprising two or more layers, e.g. for insulation	E04D 3/35
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Building panels in general	E04C 2/00
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Special rules of classification within this group

Self-supporting multi-layered roof slabs also used as roof coverings are classified both in [E04B 7/20](#) to [E04B 7/24](#), and in [E04D 3/35](#) or its

sub-groups.

E04B 7/205

[N: the slabs having non-structural supports for roofing materials (for slabs having insulating properties E04B7/225)]

References relevant to classification in this group

This subclass/group does not cover:

Self-supporting insulating slabs for roofs, the slabs having non-structural supports for roofing materials	E04B 7/225
Roof battens	E04D 12/004

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Non-structural supports for roofing materials	Supports like battens, purlins
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E04B 7/22

the slabs having insulating properties, e.g. laminated with layers of insulating material

Informative references

Attention is drawn to the following places, which may be of interest for search:

Waterproof roofing slabs comprising two or more layers, at least one of the layers being composed of insulating material	E04D 3/351
Sandwich panels	E04C 2/288 , E04C 2/292 , E04C 2/296 , E04C 2/365
Layered products	B32B
Insulating devices or arrangements	E04D 13/16

insofar as the roof covering is concerned	
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E04B 7/225

[N: the slabs having non-structural supports for roofing materials]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Roof battens	E04D 12/004
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Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Non-structural supports for roofing materials	Supports like battens, purlins
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E04B 7/24

the slabs being collapsible [N: or retractable], e.g. for transport

Informative references

Attention is drawn to the following places, which may be of interest for search:

Structures characterised by movable, separable or collapsible parts; with hinged parts	E04B 1/343 , E04B 1/344
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E04B 9/00

Ceilings; Construction of ceilings, e.g. false ceilings; Ceiling construction with regard to insulation (ceilings used as forms for making floors E04B5/00; coverings or linings for ceilings E04F13/00)

Definition statement

This subclass/group covers:

- Ceilings, i.e. suspended ceilings and false ceilings;
- Construction of suspended and false ceilings;
- Suspended and false ceiling construction with regard to insulation.

References relevant to classification in this group

This subclass/group does not cover:

Ceilings used as forms for making floors	E04B 5/00
Coverings or linings for ceilings, directly attached to the lower face of the floor slab	E04F 13/00
Plastering, finishing work	E04F 21/00

Special rules of classification within this group

This subclass comprises only suspended ceilings and false ceilings. Ceiling consisting of ceiling panels, coverings or linings attached directly to the lower face of the floor slab are only classified in [E04F 13/00](#).

Ceiling consisting of ceiling panels, coverings or linings indirectly attached to the lower face of the floor slab in a way similar to wall covering panels, e.g. with only one lath in-between wall and panel, are also only classified in [E04F 13/00](#).

E04B 9/001

[N: characterised by provisions for heat or sound insulation]

Definition statement

This subclass/group covers:

Suspended ceilings or false ceilings having provisions for heat or sound insulation.

References relevant to classification in this group

This subclass/group does not cover:

Sound absorbing open-work ceilings;	E04B 9/34
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Ceilings with acoustic baffles, e.g. sound absorbing panels vertically suspended from the ceiling	
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Suspended ceilings having slabs, panels	E04B 9/04
Heat, sound or noise insulation in buildings; with respect to heat only; with respect to sound only	E04B 1/74 ; E04B 1/76 ; E04B 1/82
Slab shaped sound absorbing elements for buildings	E04B 1/86
Slab shaped heat absorbing elements for buildings	E04B 1/80
Methods or devices for protecting against or damping noise	G10K 11/00
Means for suspending the supporting construction of the suspended ceilings from the floor slab, with arrangements for damping vibration	E04B 2009/186

Special rules of classification within this group

Suspended or false ceilings having insulating slabs or panels with non-specified insulating properties are classified in [E04B 9/04](#), not in [E04B 9/001](#).

E04B 9/003

[N: with movable parts, e.g. pivoting panels, access doors]

References relevant to classification in this group

This subclass/group does not cover:

Access doors mechanically connected to loft ladders	E04F 11/04
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Doors	E06B
Hinges	E05D
Recessed bases for lighting devices, e.g. in ceilings	F21V 21/04

E04B 9/005

[N: composed of imitation beams or beam coverings]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Coverings or linings of wood	E04F 13/10
Caps covering surfaces of the supporting construction	E04B 2009/062

E04B 9/006

[N: with means for hanging lighting fixtures or other appliances to the framework of the ceiling]

Definition statement

This subclass/group covers:

Suspended or false ceilings with means for hanging lighting fixtures or other appliances to the framework of the suspended or false ceiling, e.g. to the T-bars of a suspended ceiling.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Means for suspending the supporting construction of the suspended ceilings from the floor slab; adjustable	E04B 9/18 , E04B 9/20
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Supporting, suspending or attaching arrangements for lighting devices	F21V 21/00
Suspension of electric conduit channels	H02G 3/263
Supports for pipes	F16L 3/00

Special rules of classification within this group

Hanging means directly attached to the lower face of the floor slab are not classified here.

Translucent ceilings, i.e. permitting both the transmission and diffusion of light are classified in [E04B 9/32](#).

E04B 9/008

[N: with means for connecting partition walls or panels to the ceilings]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Partition walls; removable partition walls	E04B 2/72 , E04B 2/74
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E04B 9/02

having means for ventilation or vapour discharge

Definition statement

This subclass/group covers:

Suspended or false ceilings having means for ventilation or vapour discharge.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Ventilation, air conditioning systems; Air-humidification systems	F24F , F24F 6/00
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Clean-rooms	F24F 3/161
Suspended or false ceilings having means for ventilation or vapour discharge, the supporting ceiling grid acting as air diffuser	E04B 2009/026

Special rules of classification within this group

Classify in [E04B 9/02](#) only if the ceiling components themselves, e.g. the ceiling panels or the framework of the ceiling, have something special in relation to ventilation or vapour discharge.

A general ceiling having only openings for ventilation ducts and no other specific ventilation feature, should not be classified in [E04B 9/02](#). Conversely, a clean room ceiling having openings for ventilation ducts, the rest of the ceiling being air-tight, should be classified in [E04B 9/02](#), the air-tightness of the ceiling being a specific feature of the ceiling linked to the ventilation of the clean room.

E04B 9/04

comprising slabs, sheets, panels or the like (E04B9/06 to E04B9/34 take precedence; slabs sheets or the like per se E04C2/00) [N: Note In this subgroup the Indexing Codes of E04B2103/00 are added]

Definition statement

This subclass/group covers:

Suspended or false ceilings comprising slabs, sheets or the like, e.g. suspended ceiling comprising inverted tee-bars and panels.

References relevant to classification in this group

This subclass/group does not cover:

Open-work ceilings, e.g. grids	E04B 9/34 - E04B 9/36
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Building slabs, sheets or panels per se	E04C 2/00
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Coverings or linings for walls or ceilings	E04F 13/00
Slab shaped sound absorbing elements for buildings	E04B 1/86
Slab shaped heat absorbing elements for buildings	E04B 1/80
Ceiling panels lifting devices	E04F 21/1805

Special rules of classification within this group

Classify a suspended or false ceiling comprising slabs, sheets or the like in [E04B 9/04](#) only if the slabs, sheet or the like have some special technical feature, e.g. a special composition, a special geometry, special borders.

E04B 9/0421

comprising ducts

References relevant to classification in this group

This subclass/group does not cover:

Ceiling heating, cooling and ventilating systems in general	F24D , F24F
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E04B 9/0457

having closed internal cavities

References relevant to classification in this group

This subclass/group does not cover:

Ceiling panels having a honeycomb core structure	E04B 9/0442
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E04B 9/0478

consisting of a tray

Definition statement

This subclass/group covers:

Ceiling panels consisting of a tray made of a single element, and having 1 to 4 upstanding borders on their sides.

References relevant to classification in this group

This subclass/group does not cover:

Ceiling panels having a frame	E04B 9/0428
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E04B 9/06

characterised by constructional features of the supporting construction, [N: e.g. cross section or material of framework members]

Definition statement

This subclass/group covers:

Suspended or false ceilings characterised by constructional features of the supporting construction, e.g. by the cross section or the material of T-bar members.

References relevant to classification in this group

This subclass/group does not cover:

Constructional features of the means for suspending the supporting construction	E04B 9/18 , E04B 9/20
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Cross-sectional aspects of metal beams, girders or joists	E04C 2003/0404
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E04B 9/064

[N: comprising extruded supporting beams]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Extrusion of metal	B21C 23/00
Extrusion of plastics	B29C 47/00

E04B 9/065

[N: comprising supporting beams having a folded cross-section]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Metal beams made of bent sheet material	E04C 3/07 , E04C 3/09
Bending of sheet metal	B21D 5/00

E04B 9/08

having the capability of expansion [N: e.g. in case of fire]

Definition statement

This subclass/group covers:

Suspended or false ceilings comprising a supporting construction having the capability of expansion.

E04B 9/10

Connections between parallel members of the supporting construction (E04B9/08 takes precedence)

Definition statement

This subclass/group covers:

Connections between parallel members of the supporting construction, e.g. connections side to side of T-bars or connections tip to tip with an additional joining element

References relevant to classification in this group

This subclass/group does not cover:

Suspended or false ceilings comprising a supporting construction having the capability of expansion.	E04B 9/08
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E04B 9/12

Connections between non-parallel members of the supporting construction (E04B9/08 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Suspended or false ceilings comprising a supporting construction having the capability of expansion.	E04B 9/08
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Grid-like ceilings	E04B 9/345
Connection details of elongated metal supporting parts	E04B 1/2403
Racks for cabinets	A47B 47/00

Special rules of classification within this group

Grid-like ceilings that are suitable for supporting panels can also be classified in [E04B 9/12](#) or its subgroups.

E04B 9/18

Means for suspending the supporting construction

Definition statement

This subclass/group covers:

Means for suspending the supporting construction of the suspended ceiling from the lower face of the floor slab.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Suspended or false ceilings with means for hanging lighting fixtures or other appliances to the framework of the suspended or false ceiling,	E04B 9/006
Supporting, suspending or attaching arrangements for lighting devices	F21V 21/00
Suspension of electric conduit channels	H02G 3/263
Supports for pipes	F16L 3/00
Separate fastening elements for wall covering elements	E04F 13/0801

E04B 9/20

adjustable

Definition statement

This subclass/group covers:

Adjustable means for suspending the supporting construction of the suspended ceiling from the lower face of the floor slab, particularly means adjustable in length.

E04B 9/22

Connection of slabs, sheets or the like to the supporting construction

Definition statement

This subclass/group covers:

Connections of substantially horizontal slabs, sheets or the like to the supporting construction of a suspended or false ceiling.

References relevant to classification in this group

This subclass/group does not cover:

Open-work ceilings, e.g. grids	E04B 9/34
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E04B 9/24

with the slabs, sheets or the like positioned on [N: the upperside of], or held against [N: the underside of the] horizontal flanges of the supporting construction [N: or accessory means connected thereto]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Suspended ceilings comprising a supporting grid consisting of inverted T-shaped sections	E04B 9/067 , E04B 9/068
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E04B 9/241

[N: with the slabs, sheets or the like positioned on the upperside of the horizontal flanges of the supporting construction]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Suspended ceilings comprising a supporting grid consisting of inverted T-shaped sections	E04B 9/067 , E04B 9/068
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E04B 9/245

[by means of screws, bolts or clamping strips held against the underside of the supporting construction (E04B9/26 takes precedence)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Connections of slabs to the supporting construction of a suspended ceiling by means of snap action of elastically deformable elements held against the underside of the supporting construction	E04B 9/26
Fastening devices in general	F16B

E04B 9/247

[N: by means of sliding or pivoting locking elements, held against the underside of the supporting construction]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Fastening devices in general	F16B
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E04B 9/248

[N: by means of permanent magnetic force held against the underside of the supporting construction]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Coverings fixed to walls by means of magnets	E04F 13/088
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E04B 9/26

**by means of snap action of elastically deformable elements
[N: held against the underside of the supporting construction]**

Definition statement

This subclass/group covers:

Connections of substantially horizontal slabs, sheets or the like to the supporting construction of a suspended or false ceiling by means of snap action of elastically deformable elements held against the underside of the

supporting construction.

E04B 9/28

with the slabs, sheets or the like having grooves engaging with horizontal flanges of the supporting construction or accessory means connected thereto

Informative references

Attention is drawn to the following places, which may be of interest for search:

Suspended ceilings comprising a supporting grid consisting of inverted T-shaped sections	E04B 9/067 , E04B 9/068
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E04B 9/30

characterised by edge details of the ceiling, e.g. securing to an adjacent wall

Informative references

Attention is drawn to the following places, which may be of interest for search:

Connections between non-parallel members of the supporting construction, one member being discontinuous and abutting against the other member	E04B 9/127
Finishing strips between ceiling and wall	E04F 19/0436

E04B 9/303

[N: for flexible tensioned membranes]

Definition statement

This subclass/group covers:

Suspended or false ceilings comprising a flexible tensioned membrane secured to the supporting construction and/or to the adjacent walls.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Tapestry work	B44C 7/022
Ceiling slabs comprising fabrics tensioned on frames	E04B 2009/0492
Boards having display surface tensioning means	G09F 15/0025
Coverings made of fabrics	E04F 13/002

E04B 9/32

Translucent ceilings, i.e. permitting both the transmission and diffusion of light ([N: E04B9/303 and] E04B9/34 take precedence; details of lighting devices, of general application F21V; screens F21V11/00)

References relevant to classification in this group

This subclass/group does not cover:

Grid-like or open-work ceilings, e.g. lattice type ceilings	E04B 9/34
Details of lighting devices, of general application	F21V
Screens for lighting devices	F21V 11/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Suspended or false ceilings comprising a flexible tensioned membrane secured to the supporting construction and/or to the adjacent walls.	E04B 9/303
Translucent floors	E04B 5/46

Translucent roofs	E04D 3/06 , E04D 3/28
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Special rules of classification within this group

Suspended or false ceilings with means for hanging lighting fixtures or other appliances to the framework of the suspended or false ceiling, e.g. to the T-bars of a suspended ceiling, are classified in [E04B 9/006](#).

E04B 9/34

[N: Grid-like or] open-work ceilings, e.g. lattice type [N: boxlike modules, acoustic baffles] (E04B9/30 takes precedence, grids for lighting devices F21V)

References relevant to classification in this group

This subclass/group does not cover:

Grids for lighting devices	F21V
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Details of ceiling edges	E04B 9/30
Slab shaped sound absorbing elements for buildings	E04B 1/86
Sound or noise insulation in buildings	E04B 1/74 , E04B 1/82
Methods or devices for protecting against or damping noise	G10K 11/00

Special rules of classification within this group

Ceilings comprising suspended box-like modules are classified in [E04B 9/34](#).

Ceilings comprising suspended vertical panels used as acoustic baffles are classified in [E04B 9/34](#).

E04B 9/345

[N: consisting of non-parallel slats, e.g. grids]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Connections between non parallel members of the supporting construction of a suspended ceiling	E04B 9/12
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Special rules of classification within this group

Grid-like ceilings are classified in [E04B 9/345](#).

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Slat	A long, thin, flat piece of lumber, metal or plastic.
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E04B 9/36

consisting of parallel slats

Special rules of classification within this group

Open-work ceilings consisting of slats having horizontal principal plane and slats having vertical principal plane are classified in [E04B 9/36](#).