

**CPC****COOPERATIVE PATENT CLASSIFICATION****E04D****ROOF COVERINGS; SKY-LIGHTS; GUTTERS; ROOF-WORKING TOOLS** (coverings of outer walls by plaster or other porous material [E04F 13/00](#))**NOTE**

In this subclass, the following expression is used with the meaning indicated:  
 – "roof coverings" includes any similar kind of watertight covering against rain, snow, hail, or the like, for other parts of buildings

**WARNING**

The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

<a href="#">E04D 3/3645</a>	covered by	<a href="#">E04D 3/363</a>
<a href="#">E04D 3/367</a>	" "	<a href="#">E04D 3/364</a>
<a href="#">E04D 13/18</a>	" "	<a href="#">F24J 2/00</a> , <a href="#">H02S 20/23</a>

**E04D 1/00****Roof covering by making use of tiles, slates, shingles, or other small roofing elements** (roofing supports {and underlayers} [E04D 12/00](#))[E04D 2001/005](#)

- {the roofing elements having a granulated surface}

[E04D 1/02](#)

- Grooved or vaulted roofing elements ([E04D 1/28](#), [E04D 1/30](#) take precedence)

[E04D 1/025](#)

- • {Diamond shaped and installed in diagonal lines}

[E04D 1/04](#)

- • of ceramics, glass or concrete, with or without reinforcement

[E04D 1/045](#)

- • • {Vaulted roofing elements laid alternately side-up and side-down, e.g. monks and nuns tiles}

[E04D 1/06](#)

- • of metal

[E04D 1/08](#)

- • of plastics; {of asphalt;} of fibrous materials

[E04D 1/085](#)

- • • {of wood}

[E04D 1/10](#)

- • of specified materials {not covered by any one of groups [E04D 1/04](#) to [E04D 1/085](#)}, or of combinations of materials, {where at least one is} not covered by any one of groups [E04D 1/04](#) to [E04D 1/085](#)

[E04D 1/12](#)

- Roofing elements shaped as plain tiles or shingles, i.e. with flat outer surface ([E04D 1/28](#), [E04D 1/30](#) take precedence)

[E04D 1/125](#)

- • {Diamond shaped and installed in diagonal lines}

[E04D 1/14](#)

- • of slate material, with or without fastening means

[E04D 1/16](#)

- • of ceramics, glass or concrete, with or without reinforcement

[E04D 1/18](#)

- • of metal

[E04D 1/20](#)

- • of plastics; {of asphalt;} of fibrous materials

[E04D 1/205](#)

- • • {of wood}

[E04D 1/22](#)

- • of specified materials {not covered by any one of groups [E04D 1/14](#) to [E04D 1/205](#)}, or of combinations of materials, {where at least one is} not covered by any one of groups [E04D 1/14](#) to [E04D 1/205](#)

[E04D 1/24](#)

- Roofing elements with cavities, e.g. hollow tiles ([E04D 1/28](#) takes precedence)

[E04D 1/26](#)

- Strip-shaped roofing elements appearing as a row of shingles

- E04D 1/265 . . {the roofing elements being rigid, e.g. made of metal, wood or concrete}
- E04D 1/28 . Roofing elements comprising two or more layers, e.g. for insulation
- E04D 1/30 . Special roof-covering elements, e.g. ridge tiles, gutter tiles, gable tiles, ventilation tiles ([E04D 3/40](#), [E04D 13/03](#), [E04D 13/14](#) take precedence)
- E04D 2001/301 . . {at roof edges, e.g. intersections with walls}
- E04D 2001/302 . . . {Gable tiles}
- E04D 2001/303 . . . {Eave tiles}
- E04D 2001/304 . . {at roof intersections, e.g. valley tiles, ridge tiles}
- E04D 2001/305 . . . {Ridge or hip tiles}
- E04D 2001/306 . . . . {Under-ridge tiles}
- E04D 2001/307 . . {for passages in the roof surface}
- E04D 2001/308 . . {for special purposes not otherwise provided for, e.g. turfing tiles, step tiles}
- E04D 2001/309 . . {Ventilation tiles}
- E04D 1/34 . Fastenings for attaching roof-covering elements to the supporting elements
- E04D 1/3402 . . {for ridge or roofhip tiles}
- E04D 1/3405 . . {for eaves -, valley - or verge tiles}
- E04D 2001/3408 . . {characterised by the fastener type or material}
- E04D 2001/3411 . . . {Metal wires or rods}
- E04D 2001/3414 . . . {Metal strips or sheet metal}
- E04D 2001/3417 . . . {Synthetic, composite or molded material}
- E04D 2001/342 . . . {Flexible filamentous ties, e.g. to be twisted or forming nets}
- E04D 2001/3423 . . . {Nails, rivets, staples or straps piercing or perforating the roof covering material}
- E04D 2001/3426 . . . {Threaded elements, e.g. screws or bolts}
- E04D 2001/3429 . . . {Press-studs elements}
- E04D 2001/3432 . . . {Strips covering the gap between the roof covering elements}
- E04D 2001/3435 . . . {Adhesive, hardenable or heat-sensitive material}
- E04D 2001/3438 . . . {Fasteners comprising several coacting elements}
- E04D 2001/3441 . . . {Series of easily separable fasteners}
- E04D 2001/3444 . . {characterised by the roof covering or structure with integral or premounted fastening means}
- E04D 2001/3447 . . . {the fastening means being integral or premounted to the roof covering}
- E04D 2001/345 . . . {the fastening means being integral or premounted to the roof structure}
- E04D 2001/3452 . . {characterised by the location of the fastening means}
- E04D 2001/3455 . . . {on the internal surface of the roof covering elements}
- E04D 2001/3458 . . . {on the upper or lower transverse edges of the roof covering elements}
- E04D 2001/3461 . . . {on the lateral edges of the roof covering elements}
- E04D 2001/3464 . . . {on the lateral corners of the roof covering elements for diagonally tiled roofs}
- E04D 2001/3467 . . . {through apertures, holes or slots}
- E04D 2001/347 . . {characterised by the fastening pattern}

- E04D 2001/3473 . . . {fastening single roof elements to the roof structure with or without indirect clamping of neighbouring roof covering elements}
- E04D 2001/3476 . . . {the fastening means taking hold directly on adjacent elements of the same row and fastening them simultaneously to the roof structure}
- E04D 2001/3479 . . . {the fastening means taking hold directly on adjacent elements of the same row and fastening them only to each other}
- E04D 2001/3482 . . . {the fastening means taking hold directly on elements of succeeding rows and fastening them simultaneously to the structure}
- E04D 2001/3485 . . . {the fastening means taking hold directly on elements of succeeding rows and fastening them only to each other}
- E04D 2001/3488 . . . {characterised by the type of roof covering elements being fastened}
- E04D 2001/3491 . . . {made of flexible material, e.g. shingles}
- E04D 2001/3494 . . . {made of rigid material having a flat external surface}
- E04D 2001/3497 . . . {Spanish type tiles}
- E04D 1/36 . . . Devices for sealing the spaces or joints between roof-covering elements (sealing joints not restricted to roof-covering elements [E04B 1/68](#); {channels at the intersection of roof surfaces [E04D 13/0445](#)})
- E04D 1/365 . . . {Sealing strips between lateral sides of roof-covering elements}
- E04D 3/00** **Roof covering by making use of flat or curved slabs or stiff sheets ([E04D 1/00](#) takes precedence; built-up roofs [E04D 11/02](#))**
- E04D 3/02 . . . of plane slabs, slates, or sheets, or in which the cross-section is unimportant ([E04D 3/35](#) takes precedence)
- E04D 3/04 . . . of concrete or ceramics (of asbestos cement [E04D 3/18](#))
- E04D 3/06 . . . of glass or other translucent material; Fixing means therefor (fixing glass panes by means applicable to windows [E06B 3/54](#))
- E04D 2003/065 . . . . {Corner- or point-supported glazing}
- E04D 3/08 . . . . with metal glazing bars
- E04D 2003/0806 . . . . . {the supporting section of the glazing bar consisting of one single extruded or rolled metal part}
- E04D 2003/0812 . . . . . {the supporting section of the glazing bar consisting of one single bent or otherwise deformed sheetmetal}
- E04D 2003/0818 . . . . . {the supporting section of the glazing bar consisting of several parts, e.g. compound sections}
- E04D 2003/0825 . . . . . . {the metal section covered by parts of other material}
- E04D 2003/0831 . . . . . . . {Glazing gaskets of particular shape}
- E04D 2003/0837 . . . . . . . {Sections comprising intermediate parts of insulating material}
- E04D 2003/0843 . . . . . . . {Clamping of the sheets or glass panes to the glazing bars by means of covering strips}
- E04D 2003/085 . . . . . . . {locked by snap action}
- E04D 2003/0856 . . . . . . . {locked by screws, bolts or pins}
- E04D 2003/0862 . . . . . . . {by means of separate clips or hooks}
- E04D 2003/0868 . . . . . . . {Mutual connections and details of glazing bars}
- E04D 2003/0875 . . . . . . . {on the ridge of the roof or on intersecting roof parts}

- E04D 2003/0881 . . . . . {on the eaves of the roof}
- E04D 2003/0887 . . . . . {Glazing bars for coverings consisting of more than one sheet or glass pane}
- E04D 2003/0893 . . . . . {Glazing bars comprising means for draining condensation water or infiltrated rainwater}
- E04D 3/14 . . . with glazing bars of other material, e.g. of glass
- E04D 3/16 . . . of metal
- E04D 3/18 . . . of specified materials, or of combinations of materials, not covered by any of groups [E04D 3/04](#), [E04D 3/06](#) or [E04D 3/16](#)
- E04D 3/24 . . with special cross-section, e.g. with corrugations on both sides, with ribs, flanges, or the like ([E04D 3/35](#) takes precedence)
- E04D 3/26 . . . of concrete or ceramics
- E04D 3/28 . . . of glass {or other translucent material}
- E04D 2003/285 . . . {with specially profiled marginal portions for connecting purposes}
- E04D 3/30 . . . of metal
- E04D 3/32 . . . of plastics, fibrous materials, or asbestos cement
- E04D 3/34 . . . of specified materials, or of combinations of materials, not covered by any one of groups [E04D 3/26](#) to [E04D 3/32](#)
- E04D 3/35 . . Roofing slabs or stiff sheets comprising two or more layers, e.g. for insulation {(self-supporting roofing slabs laminated with layers of insulating material [E04B 7/22](#); insulating devices or arrangements in the roof covering [E04D 13/16](#); connecting, fastening of double roof covering [E04D 3/3608](#))}
- E04D 3/351 . . . {at least one of the layers being composed of insulating material, e.g. fibre or foam material}
- E04D 3/352 . . . . {at least one insulating layer being located between non-insulating layers, e.g. double skin slabs or sheets}
- E04D 3/354 . . . . {more than one of the layers being composed of insulating material}
- E04D 3/355 . . . . {the insulating layers of adjacent slabs having cooperating edges}
- E04D 3/357 . . . {comprising hollow cavities}
- E04D 3/358 . . . {with at least one of the layers being offset with respect to another layer}
- E04D 3/36 . . Connecting; Fastening
- E04D 3/3601 . . . {of roof covering supported by the roof structure with interposition of a insulating layer ([E04D 3/3607](#), [E04D 3/3608](#), [E04D 3/361](#) to [E04D 3/369](#) take precedence)}
- E04D 3/3602 . . . . {The fastening means comprising elongated profiles installed in or on the insulation layer}
- E04D 3/3603 . . . . {the fastening means being screws or nails}
- E04D 3/3605 . . . {of roof covering supported directly by the roof structure ([E04D 3/3607](#), [E04D 3/3608](#), [E04D 3/361](#) to [E04D 3/369](#) take precedence)}
- E04D 3/3606 . . . . {the fastening means being screws or nails}
- E04D 3/3607 . . . {the fastening means comprising spacer means adapted to the shape of the profiled roof covering}
- E04D 3/3608 . . . {for double roof covering or overroofing}

**NOTE**

E04D 3/3608  
(continued)

In groups [E04D 3/361](#) to [E04D 3/368](#), additional small fastening elements, e.g. nails, screws, are not to be considered to be separate connecting elements.

- E04D 3/361 . . by specially-profiled marginal portions of the slabs or sheets
- E04D 2003/3612 . . . {Separate fastening elements fixed to the roof structure and comprising plastic parts for avoiding thermal bridges}
- E04D 2003/3615 . . . {Separate fastening elements fixed to the roof structure and consisting of parts permitting relative movement to each other, e.g. for thermal expansion}
- E04D 2003/3617 . . . {with locking or snapping edges located in the thickness of the slab or sheet}
- E04D 3/362 . . . by locking the edge of one slab or sheet within the profiled marginal portion of the adjacent slab or sheet, e.g. using separate connecting elements
- E04D 3/363 . . . with snap action ([E04D 3/366](#) takes precedence)
- E04D 3/364 . . . by folding of the edges
- E04D 3/365 . . by simple overlapping of the marginal portions with use of separate connecting elements, e.g. hooks or bolts for corrugated sheets
- E04D 3/366 . . by closing the space between the slabs or sheets by gutters, bulges, or bridging elements, e.g. strips
- E04D 3/368 . . by forcing together the marginal portions of adjacent slabs or sheets
- E04D 3/369 . . by welding of the marginal portions of adjacent slabs or sheets {also by soldering, glueing}
- E04D 3/38 . Devices for sealing spaces or joints between roof-covering elements ([E04D 3/36](#) takes precedence; sealing joints not restricted to roof-covering elements [E04B 1/68](#))
- E04D 3/40 . Slabs or sheets locally modified for auxiliary purposes, e.g. for resting on walls, for serving as guttering; Elements for particular purposes, e.g. ridge elements, specially designed for use in conjunction with slabs or sheets {([E04D 13/15](#) and [E04D 13/174](#) take precedence; ridge sealing [E04D 1/36](#); solar collectors [F24J 2/00](#); photovoltaic devices [H01L 31/00](#))}
- E04D 3/405 . . {Wall copings}

**E04D 5/00** **Roof covering by making use of flexible material, e.g. supplied in roll form**  
(using stiff sheets [E04D 3/00](#); gravelling of flat roofs [E04D 7/00](#); {granulated roof covering [E04D 7/005](#)}; built-up roofs [E04D 11/02](#))

#### **NOTE**

Group [E04D 5/12](#) takes precedence over groups [E04D 5/02](#) to [E04D 5/10](#)

- E04D 5/02 . of materials impregnated with sealing substances, e.g. roofing felt
- E04D 5/04 . by making use of metal foils
- E04D 5/06 . by making use of plastics
- E04D 5/08 . by making use of other materials
- E04D 5/10 . by making use of compounded or laminated materials, e.g. metal foils or plastic films coated with bitumen
- E04D 5/12 . specially modified, e.g. perforated, with granulated surface, with attached pads

E04D 5/14	<ul style="list-style-type: none"> <li>Fastening means therefor</li> </ul>
E04D 5/141	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{characterised by the location of the fastening means}</li> </ul> </li> </ul>
E04D 5/142	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{along the edge of the flexible material}</li> </ul> </li> </ul> </li> </ul>
E04D 5/143	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{in the field of the flexible material}</li> </ul> </li> </ul> </li> </ul>
E04D 5/144	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{Mechanical fastening means}</li> </ul> </li> </ul>
E04D 5/145	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{Discrete fastening means, e.g. discs or clips}</li> </ul> </li> </ul> </li> </ul>
E04D 5/146	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{Linear fastening means, e.g. strips}</li> </ul> </li> </ul> </li> </ul>
E04D 5/147	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{not perforating the flexible material}</li> </ul> </li> </ul> </li> </ul>
E04D 5/148	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{fastening by gluing}</li> </ul> </li> </ul>
E04D 5/149	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{fastening by welding}</li> </ul> </li> </ul>
<b>E04D 7/00</b>	<b>Roof covering {exclusively consisting of} sealing masses applied in situ; Gravelling of flat roofs</b>
E04D 7/005	<ul style="list-style-type: none"> <li>{characterised by loose or embedded gravel or granules as an outer protection of the roof covering}</li> </ul>
<b>E04D 9/00</b>	<b>Roof covering by using straw, thatch, or like materials (impregnation against incendiary damage <a href="#">B27K</a>)</b>
<b>E04D 11/00</b>	<b>Roof covering, as far as not restricted to features covered by only one of groups <a href="#">E04D 1/00</a> to <a href="#">E04D 9/00</a>; Roof covering in ways not provided for by groups <a href="#">E04D 1/00</a> to <a href="#">E04D 9/00</a>, {e.g. built-up roofs, elevated load-supporting roof coverings}</b>
E04D 11/002	<ul style="list-style-type: none"> <li>{consisting of two or more layers, at least one of the layers permitting turfing of the roof}</li> </ul>
E04D 11/005	<ul style="list-style-type: none"> <li>{Supports for elevated load-supporting roof coverings}</li> </ul>
E04D 11/007	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{Height-adjustable spacers}</li> </ul> </li> </ul>
E04D 11/02	<ul style="list-style-type: none"> <li>Build-up roofs, i.e. consisting of two or more layers bonded together in situ, at least one of the layers being of watertight composition (<a href="#">gravelling of flat roofs E04D 7/00</a>; <a href="#">venting or ventilation E04D 13/17</a>)</li> </ul>
<b>E04D 12/00</b>	<b>Non-structural supports for roofing materials, e.g. battens, boards (<a href="#">E04D 11/02</a> {and <a href="#">E04D 13/16</a>} take precedence; {self-supporting slabs with non-structural supports for roofing materials <a href="#">E04B 7/205</a>)}</b>
E04D 12/002	<ul style="list-style-type: none"> <li>{Sheets of flexible material, e.g. roofing tile underlay}</li> </ul>
E04D 12/004	<ul style="list-style-type: none"> <li>{Battens}</li> </ul>
E04D 12/006	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{Batten-supporting means}</li> </ul> </li> </ul>
E04D 12/008	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{Ridge-batten brackets}</li> </ul> </li> </ul> </li> </ul>
<b>E04D 13/00</b>	<b>Special arrangements or devices in connection with roof coverings; {Protection against birds}; Roof drainage; {Sky-lights} (ventilation tiles <a href="#">E04D 1/30</a>; ventilation slabs <a href="#">E04D 3/40</a>; internal channels <a href="#">E04F 17/00</a>; elements therefor, see the relevant groups)</b>
E04D 13/002	<ul style="list-style-type: none"> <li>{Provisions for preventing vegetational growth, e.g. fungi, algae or moss}</li> </ul>
E04D 13/004	<ul style="list-style-type: none"> <li>{Protection against birds, mice or the like (<a href="#">scaring devices for birds in general A01M 29/00</a>)}</li> </ul>

- E04D 13/006 . {Provisions for detecting water leakage}
- E04D 13/008 . {Provisions for reducing rain noise}
- E04D 13/02 . Roof-covering aspects of dormer windows ([E04D 13/14](#) takes precedence; structures therefor [E04B 7/18](#))
- E04D 13/03 . Sky-lights; Domes; Ventilating sky-lights ([E04D 13/14](#) takes precedence; structures therefor, {e.g. dormer windows} [E04B 7/18](#); {saw-tooth roofs with light-transmission} [E04B 7/12](#))
- E04D 13/0305 . . {Supports or connecting means for sky-lights of flat or domed shape}
- E04D 13/031 . . . {characterised by a frame for connection to an inclined roof}
- E04D 13/0315 . . . {characterised by a curb frame}
- E04D 13/032 . . {Supports or connecting means for sky-lights of vaulted shape}
- E04D 13/0325 . . {provided with ventilating means ([roof ventilation F24F 7/02](#))}
- E04D 13/033 . . {provided with means for controlling the light-transmission or the heat-reflection, (e.g. shields, reflectors, cleaning devices)}
- E04D 13/0335 . . {Skylight guards, security devices protecting skylights or preventing objects or persons from falling through skylight openings}
- E04D 2013/034 . . {Daylight conveying tubular skylights}
- E04D 2013/0345 . . . {with skylight shafts extending from roof to ceiling}
- E04D 13/035 . . characterised by having movable parts {(preventing the spread of fire [A62C 3/00](#); roof structures with movable roof parts [E04B 7/16](#); operating mechanisms for sky-lights [E05F 11/00](#); automatically acting closers [E05F 17/00](#))}
- E04D 13/0351 . . . {the parts pivoting about a fixed axis}
- E04D 13/0352 . . . . {the parts being of domed or pyramidal shape}
- E04D 13/0354 . . . . {the parts being flat}
- E04D 13/0355 . . . . {The parts being of vaulted shape}
- E04D 13/0357 . . . {the parts pivoting about an axis supported on a hinged frame or arms}
- E04D 13/0358 . . . {the parts moving, in their own plane, e.g. rolling or sliding, or moving in parallel planes with or without an additional movement, e.g. both pivoting and rolling or sliding}
- E04D 13/04 . Roof drainage; Drainage fittings in flat roofs, {balconies or the like} ([gutter tiles E04D 1/30](#); [gutter slabs E04D 3/40](#); {vessels for collecting rainwater} [E03B 3/03](#); [street gullies E03F 5/04](#))
- E04D 13/0404 . . {Drainage on the roof surface}
- E04D 13/0409 . . . {Drainage outlets, e.g. gullies}
- E04D 2013/0413 . . . . {Strainers for drainage outlets}
- E04D 2013/0418 . . . . {with de-icing devices or snow melters}
- E04D 2013/0422 . . . . {for draining water above the roof level, e.g. gullies with overflow ports}
- E04D 2013/0427 . . . . {with means for controlling the flow in the outlet}
- E04D 13/0431 . . . . {with horizontal evacuation over the border of the roof}
- E04D 2013/0436 . . . . {with sealing means}
- E04D 2013/044 . . . . . {on multiple levels}
- E04D 13/0445 . . . {Drainage channels}



E04D 2013/045	. . . . {on inclined roofs}
E04D 2013/0454	. . . . . {at the intersection of roof surfaces, e.g. roof valleys}
E04D 13/0459	. . . {Drainage borders, e.g. dripping edges, gravel stops or dispersers}
E04D 2013/0463	. . . . {Dispersers}
E04D 2013/0468	. . . . {Drip edges}
E04D 2013/0472	. . . . {Gravel stops}
E04D 13/0477	. . . {Underroof drainage layers (layers permitting turfing of the roof <a href="#">E04D 11/002</a> )}
E04D 13/0481	. . . {Drainage guiding provisions, e.g. deflectors or stimulation by inclined surfaces}
E04D 2013/0486	. . . . {Deflectors}
E04D 2013/049	. . . {of condensation water or infiltrated rainwater}
E04D 2013/0495	. . . {to storage tanks}
E04D 13/064	. . Gutters {(drainage channels on the roof surface <a href="#">E04D 13/0445</a> ; gutters for greenhouses <a href="#">A01G 9/1476</a> )}
E04D 13/0641	. . . {Gutter ends}
E04D 13/0643	. . . {Gutter corners}
E04D 13/0645	. . . {Connections between gutter and down pipe}
E04D 13/0646	. . . {made of concrete or stone-like material}
E04D 13/0648	. . . {comprising provisions for heat insulation, e.g. an insulation layer}
E04D 13/068	. . . Means for fastening gutter parts together
E04D 13/0685	. . . . {in combination with hanging means}
E04D 13/072	. . . Hanging means (in combination with means for fastening gutter parts together <a href="#">E04D 13/0685</a> )
E04D 13/0722	. . . . {extending mainly under the gutter}
E04D 13/0725	. . . . {situated above or inside the gutter}
E04D 13/0727	. . . . {situated mainly at the rear side of the gutter}
E04D 13/076	. . Devices or arrangements for removing snow, ice or debris from gutters or for preventing accumulation thereof
E04D 13/0762	. . . {De-icing devices or snow melters}
E04D 13/0765	. . . {Cleaning tools}
E04D 13/0767	. . . {Strainers at connection between gutter and down pipe}
E04D 13/08	. . Down pipes; Special clamping means therefor ( <a href="#">clamping pipes in general F16B</a> , <a href="#">F16L</a> )
E04D 2013/0806	. . . {Details of lower end of down pipes, e.g. connection to water disposal system}
E04D 2013/0813	. . . . {Water diverters}
E04D 2013/082	. . . {Down pipe branches}
E04D 2013/0826	. . . {Passages of down pipes through walls or floors}
E04D 2013/0833	. . . {Elbow pieces}
E04D 2013/084	. . . {Means for fixing down pipes to structure}
E04D 2013/0846	. . . {Interconnecting down pipe parts}



E04D 2013/0853	. . . {Valves for controlling the rain water flow}
E04D 2013/086	. . . {Filters}
E04D 2013/0866	. . . {Access opening for cleaning; Devices for avoiding cumulation of debris}
E04D 2013/0873	. . . {Rain water reservoirs integrated in down pipes}
E04D 2013/088	. . . {De-icing devices or snow melters}
E04D 2013/0886	. . . {Devices for preventing climbing on down pipes}
E04D 2013/0893	. . . {incorporated in building structure}
E04D 13/10	. Snow traps; {Removing snow from roofs; Snow melters}
E04D 13/103	. . {De-icing devices or snow melters (for drainage outlets <a href="#">E04D 13/0409</a> , for gutters <a href="#">E04D 13/0762</a> , for down pipes <a href="#">E04D 13/08</a> )}
E04D 13/106	. . {Snow removing devices (for gutters <a href="#">E04D 13/076</a> )}
E04D 13/12	. Devices or arrangements allowing walking on the roof or in the gutter
E04D 13/14	. Junctions of roof sheathings to chimneys or other parts extending above the roof
E04D 13/1407	. . {for flat roofs}
E04D 13/1415	. . . {Junctions to walls extending above the perimeter of the roof (trimming strips, edge strips or fascias retaining the roof sheathing <a href="#">E04D 13/155</a> )}
E04D 2013/1422	. . {Parapet building elements for retaining the roof flashing}
E04D 13/143	. . with ventilating means {in junctions of roof sheathings to parts extending above the roof}
E04D 13/147	. . specially adapted for inclined roofs {(trays for cavity walls <a href="#">E04B 1/70</a> )}
E04D 13/1471	. . . {using a hinge mechanism for adaptation to the inclined roof}
E04D 13/1473	. . . {specially adapted to the cross-section of the parts extending above the roof}
E04D 13/1475	. . . . {wherein the parts extending above the roof have a generally rectangular cross-section}
E04D 13/1476	. . . . {wherein the parts extending above the roof have a generally circular cross-section}
E04D 13/1478	. . . {Junctions to walls extending above the roof}
E04D 13/15	. Trimming strips; Edge strips; Fascias; {Expansion joints for roofs (wall copings <a href="#">E04D 3/405</a> ; drainage borders <a href="#">E04D 13/0459</a> ; joints in general <a href="#">E04B 1/68</a> )}
E04D 13/151	. . {Expansion joints for roofs}
E04D 13/152	. . with ventilating means {in soffits or fascias; (on the eaves of the roof <a href="#">E04D 13/178</a> )}
E04D 13/155	. . retaining the roof sheathing
E04D 13/158	. . covering the overhang at the eave side, e.g. soffits, or the verge of saddle roofs
E04D 13/1585	. . . {covering the verge of saddle roofs (gable tiles <a href="#">E04D 1/30</a> )}
E04D 13/16	. Insulating devices or arrangements in so far as the roof covering is concerned, {e.g. characterised by the material or composition of the roof insulating material or its integration in the roof structure}
E04D 13/1606	. . {Insulation of the roof covering characterised by its integration in the roof structure (self-supporting insulating slabs <a href="#">E04B 7/22</a> , <a href="#">E04B 7/225</a> )}

- E04D 13/1612 . . . {the roof structure comprising a supporting framework of roof purlins or rafters}
- E04D 13/1618 . . . . {with means for fixing the insulating material between the roof covering and the upper surface of the roof purlins or rafters}
- E04D 13/1625 . . . . {with means for supporting the insulating material between the purlins or rafters (insulating layers disposed between two longitudinal supporting elements [E04B 1/7654](#))}
- E04D 13/1631 . . . . . {the means deriving from the nature or the shape of the insulating material itself}
- E04D 13/1637 . . . . {the roof purlins or rafters being mainly insulated from the interior, e.g. the insulating material being fixed under or suspended from the supporting framework}
- E04D 13/1643 . . . {the roof structure being formed by load bearing corrugated sheets, e.g. profiled sheet metal roofs}
- E04D 13/165 . . . . {Double skin roofs}
- E04D 13/1656 . . . . {Closure strips or elements filling the spaces between the corrugated sheets and a supporting wall}
- E04D 13/1662 . . . {Inverted roofs or exteriorly insulated roofs}
- E04D 13/1668 . . . {the insulating material being masses or granules applied in situ}
- E04D 13/1675 . . . . {on saddle-roofs or inclined roof surfaces}
- E04D 13/1681 . . . {Insulating of pre-existing roofs with or without ventilating arrangements}
- E04D 13/1687 . . {the insulating material having provisions for roof drainage}
- E04D 13/1693 . . . {the upper surface of the insulating material forming an inclined surface}
- E04D 13/17 . . Ventilation of roof coverings not otherwise provided for ([ventilation of rooms or spaces F24F](#))
- E04D 13/172 . . {Roof insulating material with provisions for or being arranged for permitting ventilation of the roof covering}
- E04D 13/174 . . {on the ridge of the roof}
- E04D 13/176 . . . {formed by flexible material suitable to be rolled up}
- E04D 13/178 . . {on the eaves of the roof}

**E04D 15/00****Apparatus or tools for roof working**

- E04D 15/003 . {for removing roof material (for floor coverings [E04G 23/006](#))}
- E04D 15/006 . {for cleaning the roof (for cleaning gutters [E04D 13/0765](#); for removing snow from roofs [E04D 13/106](#))}
- E04D 15/02 . for roof coverings comprising tiles, shingles, or like roofing elements ([E04D 15/003 takes precedence](#))}
- E04D 15/025 . . {Templates, gauges or spacers for installing roof tiles or roof laths (templates for rafters [E04G 21/1891](#))}
- E04D 15/04 . for roof coverings comprising slabs, sheets or flexible material
- E04D 2015/042 . . {Fixing to the roof supporting structure}
- E04D 2015/045 . . . {by nailing}
- E04D 2015/047 . . . {by screwing}
- E04D 15/06 . for handling roofing or sealing material in roll form

E04D 15/07

- for handling roofing or sealing material in bulk form