

Compilation of Changes to the CPC Scheme Between 2024.01 and 2024.05

Presentation Details

Entries for new symbols and headings:	<i>Black text in italics</i>
Entries for existing symbols and headings	
—text insertions:	<i>Green text in italics</i>
—text deletions:	Red strikethrough text with grey background
Entries for deleted symbols and headings:	Black strikethrough text

- In cases when the originating project cannot be found, "Unknown" is given for the Project information.
- Projects ending in "-F" indicate finalisation after reclassification was completed.

Project: RP11524 (A61H)

M	A61H 1/00	<p>Apparatus for passive exercising (A61H 5/00 takes precedence); Vibrating apparatus {(driving means for vibrating A61H 23/00)}; Chiropractic devices, e.g. body impacting devices, external devices for briefly extending or aligning unbroken bones</p> <p><u>NOTE</u> This group <u>does not cover</u> orthopaedic methods or devices, which are covered by group A61F 5/00</p>
M	A61H 1/003	<ul style="list-style-type: none"> • {Rocking or oscillating around a horizontal axis transversal<i>transverse</i> to the body}
M	A61H 1/005	<ul style="list-style-type: none"> • {Moveable platform<i>platforms</i>, e.g. vibrating or oscillating platform<i>platforms</i> for standing, sitting, laying; <i>or</i> leaning}
U	A61H 1/02	<ul style="list-style-type: none"> • Stretching or bending {or torsioning} apparatus for exercising <p><u>NOTE</u> In this group, documents which are of interest for more than one subgroup are classified in the hierarchically higher group only, unless there is a specific group for the combination</p>
M	A61H 1/0218	<ul style="list-style-type: none"> • {Drawing-out devices {suspension devices for supporting the patient in upright walking or standing position A61H 3/008; orthopedic devices for non-surgical treatment A61F 5/01; stretching fractured limbs A61F 5/04}
M	A61H 1/0229	<ul style="list-style-type: none"> • • {by reducing gravity forces normally applied to the body, e.g. by lifting or hanging the body or part of it (<i>suspension devices for supporting the patient in upright walking or standing position A61H 3/008</i>)}
U	A61H 1/0237	<ul style="list-style-type: none"> • • {for the lower limbs}
M	A61H 1/0255	<ul style="list-style-type: none"> • • {Both knee and hip of a patient, e.g. in supine or sitting position, the feet being moved <i>together</i> in a plane substantially parallel to the body-symmetrical plane (A61H 1/0214 takes precedence)}
M	A61H 3/00	<p>Appliances for aiding patients or disabled persons to walk about (apparatus for helping babies to walk A47D 13/04 {; orthopaedic devices for correcting deformities of, or supporting, limbs A61F 5/0102; exercising apparatus for the feet or toes A63B 23/10; {stairways or ramps E04F 11/00; <i>applying electrical currents by contact electrodes for stimulating motor muscles, e.g. walking assistance A61N 1/36003</i>)</p>
M	A61H 3/008	<ul style="list-style-type: none"> • {<i>Using using</i> suspension devices for supporting the body in an upright walking or standing position, e.g. harnesses {drawing-out devices A61H 1/0218}
U	A61H 3/02	<ul style="list-style-type: none"> • Crutches
U	A61H 3/0244	<ul style="list-style-type: none"> • • {Arrangements for storing or keeping upright when not in use}

- M A61H 2003/0272 · · · {on a single crutch allowing it to remain upright when not in use, e.g. retractable tripods (~~A61H 2003/0205 takes precedence~~)}
- M A61H 3/0288 · · {Ferrules or tips therefor (~~for walking sticks or umbrellas A45B 9/04~~)}
- M A61H 3/04 · · · Wheeled walking aids for **disabled persons** {~~patients or disabled persons~~ (A61H 3/06 takes precedence)}

Project: RP11670 (A61K)

- U A61K 36/00 Medicinal preparations of undetermined constitution containing material from algae, lichens, fungi or plants, or derivatives thereof, e.g. traditional herbal medicines {(antigens from pollen [A61K 39/36](#))}**

NOTE

In this group, common names of plants, where given, are presented in brackets following their corresponding Latin names.

- U A61K 36/06 · Fungi, e.g. yeasts
- C A61K 36/07 · Basidiomycota, e.g. Cryptococcus

WARNING

Group [A61K 36/07](#) is impacted by reclassification into groups [A61K 36/071](#) and [A61K 36/078](#).

Groups [A61K 36/07](#), [A61K 36/071](#) and [A61K 36/078](#) should be considered in order to perform a complete search.

- N [A61K 36/071](#) · · · {*Agaricus*}

WARNING

Group [A61K 36/071](#) is incomplete pending reclassification of documents from group [A61K 36/07](#).

Groups [A61K 36/07](#) and [A61K 36/071](#) should be considered in order to perform a complete search.

- U [A61K 36/074](#) · · · Ganoderma
- U [A61K 36/076](#) · · · Poria
- N [A61K 36/078](#) · · · {*Psilocybe*}

WARNING

Group [A61K 36/078](#) is incomplete pending reclassification of documents from group [A61K 36/07](#).

Groups [A61K 36/07](#) and [A61K 36/078](#) should be considered in order to perform a complete search.

- M [A61K 36/10](#) · Bryophyta (*mosses*)
- C [A61K 36/18](#) · Magnoliophyta (angiosperms)

WARNING

Group [A61K 36/18](#) is impacted by reclassification into groups [A61K 36/348](#), [A61K 36/3482](#), [A61K 36/3486](#), [A61K 36/577](#), [A61K 36/5775](#), [A61K 36/5777](#) and [A61K 36/742](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- C [A61K 36/185](#) · Magnoliopsida (dicotyledons)

WARNING

Group [A61K 36/185](#) is impacted by reclassification into groups [A61K 36/348](#), [A61K 36/3482](#), [A61K 36/3486](#), [A61K 36/577](#), [A61K 36/5775](#), [A61K 36/5777](#) and [A61K 36/742](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U A61K 36/34 . . . Campanulaceae (Bellflower family)
- U A61K 36/346 Platycodon
- N A61K 36/348 . . . {Cannabaceae}

WARNING

Groups [A61K 36/348](#), [A61K 36/3482](#) and [A61K 36/3486](#) are incomplete pending reclassification of documents from groups [A61K 36/18](#) and [A61K 36/185](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N A61K 36/3482 {Cannabis}
- N A61K 36/3486 {Humulus}
- U A61K 36/35 . . . Caprifoliaceae (Honeysuckle family)
- U A61K 36/57 . . . Magnoliaceae (Magnolia family)
- U A61K 36/575 Magnolia
- N A61K 36/577 . . . {Malvaceae (Mallow family)}

WARNING

Groups [A61K 36/577](#), [A61K 36/5775](#) and [A61K 36/5777](#) are incomplete pending reclassification of documents from groups [A61K 36/18](#) and [A61K 36/185](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N A61K 36/5775 {Hibiscus}
- N A61K 36/5777 {Theobroma, e.g. cacao or cocoa}
- U A61K 36/58 . . . Meliaceae (Chinaberry or Mahogany family), e.g. Azadirachta (neem)
- C A61K 36/74 . . . Rubiaceae (Madder family)

WARNING

Group [A61K 36/74](#) is impacted by reclassification into group [A61K 36/742](#). Groups [A61K 36/74](#) and [A61K 36/742](#) should be considered in order to perform a complete search.

- N A61K 36/742 {Coffea, e.g. coffee}

WARNING

Group [A61K 36/742](#) is incomplete pending reclassification of documents from groups [A61K 36/18](#), [A61K 36/185](#) and [A61K 36/74](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U A61K 36/744 Gardenia

Project: RP10399-F (A61M)

- U A61M 1/00 Suction or pumping devices for medical purposes; Devices for carrying-off, for treatment of, or for carrying-over, body-liquids; Drainage systems (catheters [A61M 25/00](#); tube connectors, tube couplings, valves or branch units specially adapted for medical use [A61M 39/00](#); devices for taking samples of blood [A61B 5/15](#); filters implantable into blood vessels [A61F 2/01](#))

- M A61M 1/14
- Dialysis systems; Artificial kidneys; Blood oxygenators (semi-permeable membranes characterised by the material, manufacturing processes therefor [B01D 71/00](#)); Reciprocating systems for treatment of body fluids, e.g. single needle systems for hemofiltration or pheresis}
- WARNING**
Group A61M 1/14 is impacted by reclassification into groups A61M 1/15–A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622–A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/15
- {with a cassette forming partially or totally the flow circuit for the treating fluid, e.g. the dialysate fluid circuit or the treating gas circuit}
- WARNING**
Groups A61M 1/15–A61M 1/1566 are incomplete pending reclassification of documents from groups A61M 1/14, A61M 1/16–A61M 1/267, A61M 1/30–A61M 1/362. All groups listed in this Warning should be considered in order to perform a complete search.
- U A61M 1/156
- • {Constructional details of the cassette, e.g. specific details on material or shape}
- M A61M 1/1561
- • • {at least one cassette surface or portion thereof being flexible, e.g. the cassette having a rigid base portion with preformed channels and being covered with a foil}
- WARNING**
Group A61M 1/1561 is incomplete pending reclassification of documents from group A61M 1/14. Groups A61M 1/14 and A61M 1/1561 should be considered in order to perform a complete search.
- U A61M 1/1562
- • • {Details of incorporated reservoirs}
- M A61M 1/15625
- • • • {the reservoirs acting as balance chambers}
- WARNING**
Group A61M 1/15625 is incomplete pending reclassification of documents from group A61M 1/14. Groups A61M 1/14 and A61M 1/15625 should be considered in order to perform a complete search.
- M A61M 1/159
- • • {specially adapted for peritoneal dialysis}
- WARNING**
Group A61M 1/159 is incomplete pending reclassification of documents from groups A61M 1/14, A61M 1/16–A61M 1/362. All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/16
- • with membranes
- WARNING**
Group A61M 1/16 is impacted by reclassification into groups A61M 1/15–A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622–A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/1601 . . . {Control or regulation}
- WARNING
Group A61M 1/1601 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1603 . . . {Regulation parameters}
- WARNING
Group A61M 1/1603 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1605 {Physical characteristics of the dialysate fluid}
- WARNING
Group A61M 1/1605 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1607 {before use, i.e. upstream of dialyser}
- WARNING
Group A61M 1/1607 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1609 {after use, i.e. downstream of dialyser}
- WARNING
Group A61M 1/1609 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1611 {Weight of the patient}
- WARNING
Group A61M 1/1611 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1613 {Profiling or modelling of patient or predicted treatment evolution or outcome}
- WARNING
Group A61M 1/1613 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/1615
 - • • {using measurements made at different flow rates}
 - WARNING
Group A61M 1/1615 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/1617
 - • • {using measurements made during a temporary variation of a characteristic of the fresh dialysis fluid}
 - WARNING
Group A61M 1/1617 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/1619
 - • • {Sampled collection of used dialysate, i.e. obviating the need for recovery of whole dialysate quantity for post-dialysis analysis}
 - WARNING
Group A61M 1/1619 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/1621
 - • • {Constructional aspects thereof (semi-permeable membranes for separation processes characterised by their properties [B01D 69/00](#); semi permeable membranes characterised by their material [B01D 71/00](#))}
 - WARNING
Group A61M 1/1621 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401, A61M 1/3622 - A61M 1/3623 and A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/1623
 - • • {Disposition or location of membranes relative to fluids}
 - WARNING
Group A61M 1/1623 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/1625
 - • • • {Dialyser of the outside perfusion type, i.e. blood flow outside hollow membrane fibres or tubes}
 - WARNING
Group A61M 1/1625 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/1627 {Dialyser of the inside perfusion type, i.e. blood flow inside hollow membrane fibres or tubes}
- WARNING
Group A61M 1/1627 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1629 {with integral heat exchanger}
- WARNING
Group A61M 1/1629 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1631 {having non-tubular membranes, e.g. sheets}
- WARNING
Group A61M 1/1631 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1633 {with more than one dialyser unit}
- WARNING
Group A61M 1/1633 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1635 {with volume chamber balancing devices between used and fresh dialysis fluid}
- WARNING
Group A61M 1/1635 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1637 {containing the whole volume of dialysis fluid used during a treatment session}
- WARNING
Group A61M 1/1637 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/1639 {linked by membranes}
- WARNING
Group A61M 1/1639 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1641 {linked by pistons}
- WARNING
Group A61M 1/1641 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1643 {with weighing of fresh and used dialysis fluid}
- WARNING
Group A61M 1/1643 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1645 {with mechanically linked peristaltic dialysis fluid pumps one upstream, the other one downstream of the dialyser}
- WARNING
Group A61M 1/1645 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1647 {with flow rate measurement of the dialysis fluid, upstream and downstream of the dialyser}
- WARNING
Group A61M 1/1647 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1649 {with pulsatile dialysis fluid flow}
- WARNING
Group A61M 1/1649 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/165 {with a dialyser bypass on the dialysis fluid line}
- WARNING
Group A61M 1/165 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/1652 . . . {Holding or locking systems for the membrane unit}

WARNING

Group A61M 1/1652 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/1654 . . . {Dialysates therefor}

WARNING

Group A61M 1/1654 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/1656 . . . {Apparatus for preparing dialysates}

WARNING

Group A61M 1/1656 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/1657 {with centralised supply of dialysate or constituent thereof for more than one dialysis unit}

WARNING

Group A61M 1/1657 is incomplete pending reclassification of documents from groups A61M 1/14, A61M 1/16 – A61M 1/267, A61M 1/30 – A61M 1/362.

All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/1658 {Degasification}

WARNING

Group A61M 1/1658 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/166 {Heating (for sterilisation [A61M 1/1686](#))}

WARNING

Group A61M 1/166 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/1662 {with heat exchange between fresh and used dialysate}
- WARNING
Group A61M 1/1662 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1664 {with temperature control}
- WARNING
Group A61M 1/1664 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1666 {by dissolving solids}
- WARNING
Group A61M 1/1666 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1668 {Details of containers}
- WARNING
Group A61M 1/1668 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/167 {Flexible packaging for solid concentrates}
- WARNING
Group A61M 1/167 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1672 {using membrane filters, e.g. for sterilising the dialysate}
- WARNING
Group A61M 1/1672 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1674 {using UV radiation sources for sterilising the dialysate}
- WARNING
Group A61M 1/1674 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/1676
- • • {containing proteins, e.g. albumin}
- WARNING
Group A61M 1/1676 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1678
- • • {intracorporal (peritoneal dialysis [A61M 1/28](#))}
- WARNING
Group A61M 1/1678 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/168
- • • {Sterilisation or cleaning before or after use}
- WARNING
Group A61M 1/168 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1682
- • • • {both machine and membrane module, i.e. also the module blood side}
- WARNING
Group A61M 1/1682 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1684
- • • • • {Checking the module characteristics before reuse}
- WARNING
Group A61M 1/1684 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1686
- • • • • {by heat}
- WARNING
Group A61M 1/1686 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1688
- • • • • {with recirculation of the sterilising fluid}
- WARNING
Group A61M 1/1688 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/169 . . . {using chemical substances}
- WARNING
Group A61M 1/169 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1692 . . . {Detection of blood traces in dialysate}
- WARNING
Group A61M 1/1692 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1694 . . . {with recirculating dialysing liquid}
- WARNING
Group A61M 1/1694 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1696 . . . {with dialysate regeneration}
- WARNING
Group A61M 1/1696 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/1698 . . . {Blood oxygenators with or without heat-exchangers (intracorporal [A61M 1/1678](#); manufacturing of membranes therefor [B01D 67/00](#); semi-permeable membranes for separation processes characterised by their properties [B01D 69/00](#); semi-permeable membranes characterised by their material [B01D 71/00](#))}
- WARNING
Group A61M 1/1698 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/26 . . . {and internal elements} which are moving
- WARNING
Group A61M 1/26 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/262 . . . {rotating}
- WARNING
Group A61M 1/262 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/265 . . . {inducing Taylor vortices}
- WARNING
Group A61M 1/265 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/267 . . . {used for pumping}
- WARNING
Group A61M 1/267 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/28 . . . {Peritoneal dialysis (; Other peritoneal treatment, e.g. oxygenation)}
- WARNING
Group A61M 1/28 is incomplete pending reclassification of documents from groups A61M 1/281, A61M 1/282, A61M 1/284, A61M 1/285, A61M 1/287 and A61M 1/288.
Group A61M 1/28 is also impacted by reclassification into group A61M 1/159.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/281 . . . {Instillation other than by gravity}
- WARNING
Group A61M 1/281 is impacted by reclassification into groups A61M 1/28 and A61M 1/159.
Groups A61M 1/281, A61M 1/28 and A61M 1/159 should be considered in order to perform a complete search.
- M A61M 1/282 . . . {Operational modes}
- WARNING
Group A61M 1/282 is impacted by reclassification into groups A61M 1/28 and A61M 1/159.
Groups A61M 1/282, A61M 1/28 and A61M 1/159 should be considered in order to perform a complete search.
- M A61M 1/284 . . . {Continuous flow peritoneal dialysis [CFPD]}
- WARNING
Group A61M 1/284 is impacted by reclassification into groups A61M 1/28 and A61M 1/159;
Groups A61M 1/284, A61M 1/28 and A61M 1/159 should be considered in order to perform a complete search.

- M A61M 1/285
- • • {Catheters therefor}
- WARNING
Group A61M 1/285 is impacted by reclassification into groups A61M 1/28 and A61M 1/159.
Groups A61M 1/285, A61M 1/28 and A61M 1/159 should be considered in order to perform a complete search.
- M A61M 1/287
- • • {Dialysates therefor}
- WARNING
Group A61M 1/287 is impacted by reclassification into groups A61M 1/28 and A61M 1/159.
Groups A61M 1/287, A61M 1/28 and A61M 1/159 should be considered in order to perform a complete search.
- M A61M 1/288
- • • {Priming (priming in extracorporeal blood circuits [A61M 1/3643](#))}
- WARNING
Group A61M 1/288 is impacted by reclassification into groups A61M 1/28 and A61M 1/159.
Groups A61M 1/288, A61M 1/28 and A61M 1/159 should be considered in order to perform a complete search.
- M A61M 1/30
- • Single needle dialysis {; Reciprocating systems, alternately withdrawing blood from and returning it to the patient, e.g. single-lumen-needle dialysis or single needle systems for hemofiltration or pheresis}
- WARNING
Group A61M 1/30 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/301
- • • {Details}
- WARNING
Group A61M 1/301 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/302
- • • {having a reservoir for withdrawn untreated blood}
- WARNING
Group A61M 1/302 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/303
- • • {having a reservoir for treated blood to be returned}
- WARNING
Group A61M 1/303 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/304 {Treatment chamber used as reservoir, e.g. centrifuge bowl or filter with movable membrane}
- WARNING
Group A61M 1/304 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/305 {Control of inversion point between collection and re-infusion phase}
- WARNING
Group A61M 1/305 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/306 {Pressure control, e.g. using substantially rigid closed or gas buffered or elastic reservoirs}
- WARNING
Group A61M 1/306 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/307 {Time control}
- WARNING
Group A61M 1/307 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/308 {Volume control, e.g. with open or flexible containers, by counting the number of pump revolutions, weighing}
- WARNING
Group A61M 1/308 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/309 {with trans-membrane pressure [TMP] increasing substantially continuously during arterial phase}
- WARNING
Group A61M 1/309 is impacted by reclassification into groups A61M 1/15 – A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/32
- Oxygenators without membranes
- WARNING**
Group A61M 1/32 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/322
- {Antifoam; Defoaming}
- WARNING**
Group A61M 1/322 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/325
- {Surfactant coating; Improving wettability}
- WARNING**
Group A61M 1/325 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/327
- {using catalytic production of oxygen}
- WARNING**
Group A61M 1/327 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/34
- Filtering material out of the blood by passing it through a membrane, i.e. hemofiltration or diafiltration
- WARNING**
Group A61M 1/34 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3401
- {Cassettes therefor}
- WARNING**
Group A61M 1/3401 is incomplete pending reclassification of documents from groups A61M 1/14, A61M 1/16 - A61M 1/267, A61M 1/30 - A61M 1/362. All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3403
- {Regulation parameters}
- WARNING**
Group A61M 1/3403 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3406
- • • {Physical characteristics of the filtrate, e.g. urea}
- WARNING
Group A61M 1/3406 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/341
- • • {by measuring the filtrate rate or volume}
- WARNING
Group A61M 1/341 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3413
- • {Diafiltration}
- WARNING
Group A61M 1/3413 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3417
- • • {using distinct filters for dialysis and ultra-filtration}
- WARNING
Group A61M 1/3417 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/342
- • {Adding solutions to the blood, e.g. substitution solutions (for preventing coagulation [A61M 1/3672](#))}
- WARNING
Group A61M 1/342 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3424
- • • {Substitution fluid path}
- WARNING
Group A61M 1/3424 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3427
- • • • {back through the membrane, e.g. by inverted trans-membrane pressure [TMP]}
- WARNING
Group A61M 1/3427 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3431 . . . {upstream of the filter}
- WARNING
Group A61M 1/3431 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3434 . . . {with pre-dilution and post-dilution}
- WARNING
Group A61M 1/3434 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3437 . . . {downstream of the filter, e.g. post-dilution with filtrate}
- WARNING
Group A61M 1/3437 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3441 . . . {Substitution rate control as a function of the ultrafiltration rate}
- WARNING
Group A61M 1/3441 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3444 . . . {in which the collected ultra-filtrate expels an equal volume of substitution fluid from a reservoir}
- WARNING
Group A61M 1/3444 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3448 . . . {by mechanically linked pumps in both ultra-filtrate and substitution flow line}
- WARNING
Group A61M 1/3448 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3451 . . . {the difference in weight between both ultra-filtrate and substitution reservoir being used as control signal}
- WARNING
Group A61M 1/3451 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3455 . . . {Substitution fluids}
- WARNING
Group A61M 1/3455 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3458 . . . {having electrolytes not present in the dialysate}
- WARNING
Group A61M 1/3458 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3462 . . . {Circuits for the preparation thereof}
- WARNING
Group A61M 1/3462 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3465 . . . {using dialysate as substitution fluid}
- WARNING
Group A61M 1/3465 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3468 . . . {using treated filtrate as substitution fluid}
- WARNING
Group A61M 1/3468 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3472 . . {with treatment of the filtrate}
- WARNING
Group A61M 1/3472 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3475
- • {with filtrate treatment agent in the same enclosure as the membrane}
- WARNING
Group A61M 1/3475 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3479
- • {by dialysing the filtrate}
- WARNING
Group A61M 1/3479 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3482
- • {by filtrating the filtrate using another cross-flow filter, e.g. a membrane filter}
- WARNING
Group A61M 1/3482 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3486
- • {Biological, chemical treatment, e.g. chemical precipitation; treatment by absorbents}
- WARNING
Group A61M 1/3486 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3489
- • • {by biological cells, e.g. bioreactor}
- WARNING
Group A61M 1/3489 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3493
- • • {using treatment agents in suspension}
- WARNING
Group A61M 1/3493 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3496
- • {Plasmapheresis; Leucopheresis; Lymphopheresis ([A61M 1/3472](#) takes precedence)}
- WARNING
Group A61M 1/3496 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/36
- Other treatment of blood in a by-pass of the natural circulatory system, e.g. temperature adaptation, irradiation {; Extra-corporeal blood circuits}

WARNING

Group A61M 1/36 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3601
- {Extra-corporeal circuits in which the blood fluid passes more than once through the treatment unit}

WARNING

Group A61M 1/3601 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3603
- • {in the same direction}

WARNING

Group A61M 1/3603 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3604
- • {in opposite directions}

WARNING

Group A61M 1/3604 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3606
- {Arrangements for blood-volume reduction of extra-corporeal circuits}

WARNING

Group A61M 1/3606 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3607
- {Regulation parameters}

WARNING

Group A61M 1/3607 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3609
- • {Physical characteristics of the blood, e.g. haematocrit, urea}

WARNING

Group A61M 1/3609 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/361

- • • {before treatment}

WARNING

Group A61M 1/361 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/3612

- • • {after treatment}

WARNING

Group A61M 1/3612 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/3613

- {Reperfusion, e.g. of the coronary vessels, e.g. retroperfusion}

WARNING

Group A61M 1/3613 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/3615

- {Cleaning blood contaminated by local chemotherapy of a body part temporarily isolated from the blood circuit}

WARNING

Group A61M 1/3615 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/3616

- {Batch-type treatment}

WARNING

Group A61M 1/3616 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/3618

- {Magnetic separation}

WARNING

Group A61M 1/3618 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 1/362

- {changing physical properties of target cells by binding them to added particles to facilitate their subsequent separation from other cells, e.g. immunoaffinity}

WARNING

Group A61M 1/362 is impacted by reclassification into groups A61M 1/15 - A61M 1/159, A61M 1/1657, A61M 1/3401 and A61M 1/3622 - A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3621 • {Extra-corporeal blood circuits (single-needle circuits [A61M 1/30](#))}

WARNING

Group A61M 1/3621 is impacted by reclassification into groups A61M 1/3622 - A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3622 • • {with a cassette forming partially or totally the blood circuit}

WARNING

Groups A61M 1/3622 - A61M 1/362266 are incomplete pending reclassification of documents from groups A61M 1/14, A61M 1/16 - A61M 1/267, A61M 1/30 - A61M 1/387.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3623 • • {Means for actively controlling temperature of blood}

WARNING

Group A61M 1/3623 is incomplete pending reclassification of documents from groups A61M 1/14, A61M 1/16 - A61M 1/267, A61M 1/30 - A61M 1/387.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3624 • • {Level detectors; Level control}

WARNING

Group A61M 1/3624 is impacted by reclassification into groups A61M 1/3622 - A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3626 • • {Gas bubble detectors}

WARNING

Group A61M 1/3626 is impacted by reclassification into groups A61M 1/3622 - A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3627 • • {Degassing devices; Buffer reservoirs; Drip chambers; Blood filters}

WARNING

Group A61M 1/3627 is impacted by reclassification into groups A61M 1/3622 - A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3629 • • {degassing by changing pump speed, e.g. during priming}

WARNING

Group A61M 1/3629 is impacted by reclassification into groups A61M 1/3622 - A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/363 . . . {Degassing by using vibrations}
- WARNING
Group A61M 1/363 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3632 . . . {Combined venous-cardiotomy reservoirs}
- WARNING
Group A61M 1/3632 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3633 . . . {Blood component filters, e.g. leukocyte filters}
- WARNING
Group A61M 1/3633 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3635 . . . {Constructional details}
- WARNING
Group A61M 1/3635 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3636 . . . {having a flexible housing}
- WARNING
Group A61M 1/3636 is impacted by reclassification into groups A61M 1/3622, A61M 1/36222 and A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3638 . . . {with a vapour trap}
- WARNING
Group A61M 1/3638 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3639 . . . {Blood pressure control, pressure transducers specially adapted therefor}
- WARNING
Group A61M 1/3639 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3641 . . . {Pressure isolators}
- WARNING
Group A61M 1/3641 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3643 . . . {Priming, rinsing before or after use}

WARNING

Group A61M 1/3643 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3644 . . . {Mode of operation}

WARNING

Group A61M 1/3644 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3646 {Expelling the residual body fluid after use, e.g. back to the body}

WARNING

Group A61M 1/3646 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3647 {with recirculation of the priming solution}

WARNING

Group A61M 1/3647 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3649 {using dialysate as priming or rinsing liquid}

WARNING

Group A61M 1/3649 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/365 {through membranes, e.g. by inverted trans-membrane pressure [TMP]}

WARNING

Group A61M 1/365 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/3652 {using gas, e.g. air}

WARNING

Group A61M 1/3652 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

M	A61M 1/3653	<ul style="list-style-type: none"> • • • {Interfaces between patient blood circulation and extra-corporal blood circuit} <p style="color: red; margin-top: 10px;"><u>WARNING</u> Group A61M 1/3653 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3655	<ul style="list-style-type: none"> • • • {Arterio-venous shunts or fistulae} <p style="color: red; margin-top: 10px;"><u>WARNING</u> Group A61M 1/3655 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3656	<ul style="list-style-type: none"> • • • {Monitoring patency or flow at connection sites; Detecting disconnections} <p style="color: red; margin-top: 10px;"><u>WARNING</u> Group A61M 1/3656 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3658	<ul style="list-style-type: none"> • • • • {Indicating the amount of purified blood recirculating in the fistula or shunt} <p style="color: red; margin-top: 10px;"><u>WARNING</u> Group A61M 1/3658 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3659	<ul style="list-style-type: none"> • • • • {Cannulae pertaining to extracorporeal circulation} <p style="color: red; margin-top: 10px;"><u>WARNING</u> Group A61M 1/3659 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3661	<ul style="list-style-type: none"> • • • • • {for haemodialysis} <p style="color: red; margin-top: 10px;"><u>WARNING</u> Group A61M 1/3661 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3663	<ul style="list-style-type: none"> • • • {Flow rate transducers; Flow integrators} <p style="color: red; margin-top: 10px;"><u>WARNING</u> Group A61M 1/3663 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3664	<ul style="list-style-type: none"> • • • {for preparing cardioplegia solutions} <p style="color: red; margin-top: 10px;"><u>WARNING</u> Group A61M 1/3664 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.</p>

		<p>All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3666	<ul style="list-style-type: none">• • {Cardiac or cardiopulmonary bypass, e.g. heart-lung machines} <p><u>WARNING</u> Group A61M 1/3666 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3667	<ul style="list-style-type: none">• • • {with assisted venous return} <p><u>WARNING</u> Group A61M 1/3667 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3669	<ul style="list-style-type: none">• • {Electrical impedance measurement of body fluids; transducers specially adapted therefor} <p><u>WARNING</u> Group A61M 1/3669 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/367	<ul style="list-style-type: none">• • {Circuit parts not covered by the preceding subgroups of group A61M 1/3621} <p><u>WARNING</u> Group A61M 1/367 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3672	<ul style="list-style-type: none">• {Means preventing coagulation} <p><u>WARNING</u> Group A61M 1/3672 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3673	<ul style="list-style-type: none">• • {Anticoagulant coating, e.g. Heparin coating} <p><u>WARNING</u> Group A61M 1/3673 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61M 1/3675	<ul style="list-style-type: none">• • {Deactivation} <p><u>WARNING</u> Group A61M 1/3675 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623. All groups listed in this Warning should be considered in order to perform a complete search.</p>

- M A61M 1/3676
- • • {by interposing a liquid layer between blood and air}
- WARNING
Group A61M 1/3676 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3678
- • {Separation of cells using wave pressure; Manipulation of individual corpuscles}
- WARNING
Group A61M 1/3678 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3679
- • {by absorption ([A61M 1/3675](#) takes precedence)}
- WARNING
Group A61M 1/3679 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3681
- • {by irradiation}
- WARNING
Group A61M 1/3681 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3683
- • • {using photoactive agents}
- WARNING
Group A61M 1/3683 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3686
- • • • {by removing photoactive agents after irradiation}
- WARNING
Group A61M 1/3686 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3687
- • {Chemical treatment ([A61M 1/3675](#) takes precedence)}
- WARNING
Group A61M 1/3687 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3689
- • • {by biological cells}
- WARNING
Group A61M 1/3689 is impacted by reclassification into groups A61M 1/3622 – A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/369
 - {Temperature treatment}

WARNING
Group A61M 1/369 is impacted by reclassification into groups A61M 1/3622–A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3692
 - {Washing or rinsing blood or blood constituents}

WARNING
Group A61M 1/3692 is impacted by reclassification into groups A61M 1/3622, A61M 1/36222, A61M 1/362223, A61M 1/362227, A61M 1/36223, A61M 1/36224, A61M 1/36225, A61M 1/36226, A61M 1/362261, A61M 1/362262, A61M 1/362263, A61M 1/362264, A61M 1/362265, A61M 1/362266 and A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3693
 - {using separation based on different densities of components, e.g. centrifuging}

WARNING
Group A61M 1/3693 is impacted by reclassification into groups A61M 1/3622–A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3695
 - • {with sedimentation by gravity}

WARNING
Group A61M 1/3695 is impacted by reclassification into groups A61M 1/3622–A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3696
 - • {with means for adding or withdrawing liquid substances during the centrifugation, e.g. continuous centrifugation}

WARNING
Group A61M 1/3696 is impacted by reclassification into groups A61M 1/3622–A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/3698
 - • {Expressing processed fluid out from the turning rotor using another fluid compressing the treatment chamber; Variable volume rotors}

WARNING
Group A61M 1/3698 is impacted by reclassification into groups A61M 1/3622–A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/38
 - • Removing constituents from donor blood and {storing or} returning remainder to body {, e.g. for transfusion}

WARNING
Group A61M 1/38 is impacted by reclassification into groups A61M 1/3622–A61M 1/3623.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 1/382
- • {Optimisation of blood component yield}
- WARNING**
Group A61M 1/382 is impacted by reclassification into groups A61M 1/3622 -- A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/385
- • • {taking into account of the patient characteristics}
- WARNING**
Group A61M 1/385 is impacted by reclassification into groups A61M 1/3622 -- A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61M 1/387
- • • {taking into account of the needs or inventory}
- WARNING**
Group A61M 1/387 is impacted by reclassification into groups A61M 1/3622 -- A61M 1/3623.
All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP10457 (B23D)

- C B23D 47/00**
- Sawing machines or sawing devices working with circular saw blades, characterised only by constructional features of particular parts (constructional features of these parts *per se* [B23Q](#); details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed [B25F 5/00](#))**
- WARNING**
Group [B23D 47/00](#) is impacted by reclassification into groups [B23D 47/128](#) and [B23D 47/132](#).
Groups [B23D 47/00](#), [B23D 47/128](#) and [B23D 47/132](#) should be considered in order to perform a complete search.
- U B23D 47/12
- of drives for circular saw blades
- U B23D 47/126
- • {Angle drives}
- N B23D 47/128
- {of means to position the saw blade at a specified angle when adjusting about an axis parallel to the work support surface}
- WARNING**
Group [B23D 47/128](#) is incomplete pending reclassification of documents from group [B23D 47/00](#).
Groups [B23D 47/00](#) and [B23D 47/128](#) should be considered in order to perform a complete search.
- N B23D 47/132
- {of means to position the saw blade at a specified angle when adjusting about an axis perpendicular to the work support surface}
- WARNING**
Group [B23D 47/132](#) is incomplete pending reclassification of documents from group [B23D 47/00](#).
Groups [B23D 47/00](#) and [B23D 47/132](#) should be considered in order to perform a complete search.

- C B23D 49/00** **Machines or devices for sawing with straight reciprocating saw blades, e.g. hacksaws**
- WARNING**
*Group [B23D 49/00](#) is impacted by reclassification into groups [B23D 49/012](#), [B23D 49/013](#) and [B23D 49/211](#).
 All groups listed in this Warning should be considered in order to perform a complete search.*
- U B23D 49/007 • {Jig saws, i.e. machine saws with a vertically reciprocating narrow saw blade chucked at both ends for contour cutting}
- U B23D 49/008 • • {hand-driven or foot-driven}
- N B23D 49/012 • {combined with tool of another type}
- WARNING**
*Group [B23D 49/012](#) is incomplete pending reclassification of documents from group [B23D 49/00](#).
 Groups [B23D 49/00](#) and [B23D 49/012](#) should be considered in order to perform a complete search.*
- N B23D 49/013 • {with means to change to another type of tool}
- WARNING**
*Group [B23D 49/013](#) is incomplete pending reclassification of documents from group [B23D 49/00](#).
 Groups [B23D 49/00](#) and [B23D 49/013](#) should be considered in order to perform a complete search.*
- U B23D 49/10 • Hand-held or hand-operated sawing devices with straight saw blades
- U B23D 49/16 • • actuated by electric or magnetic power or prime movers ([B23D 49/11](#) takes precedence)
- U B23D 49/162 • • • {Pad sawing devices}
- U B23D 49/167 • • • {with means to adjust the guide plate or with means to adjust the plane in which the saw blade moves}
- N B23D 49/211 • {whereby the saw carrier pivots about an axis to feed the saw blade into the workpiece during cutting}
- WARNING**
*Group [B23D 49/211](#) is incomplete pending reclassification of documents from group [B23D 49/00](#).
 Groups [B23D 49/00](#) and [B23D 49/211](#) should be considered in order to perform a complete search.*
- U B23D 51/00** **Sawing machines or sawing devices working with straight blades, characterised only by constructional features of particular parts (constructional features of these parts per se [B23Q](#); details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed [B25F 5/00](#)); Carrying or attaching means for tools, covered by this subclass, which are connected to a carrier at both ends**
- U B23D 51/02 • of beds; of guiding arrangements for work-tables or saw carriers; of frames
- C B23D 51/025 • • {of arrangements for guiding the saw blade}
- WARNING**
Group [B23D 51/025](#) is impacted by reclassification into groups [B23D 51/026](#), [B23D 51/027](#), [B23D 51/028](#) and [B23D 51/029](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B23D 51/026
- • {by plural opposed guide surfaces}
- WARNING
Groups [B23D 51/026](#), [B23D 51/027](#), [B23D 51/028](#) and [B23D 51/029](#) are incomplete pending reclassification of documents from group [B23D 51/025](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N B23D 51/027
- • • {with adjustment of a space between the guide surfaces}
- N B23D 51/028
- • • {with adjustment of the guide surfaces by rotation about an axis parallel to the work support surface}
- N B23D 51/029
- • • {with adjustment of the guide surfaces by rotation about an axis perpendicular to the work support surface}
- C B23D 51/16
- of drives or feed mechanisms for straight tools, e.g. saw blades, or bows
- WARNING
Group [B23D 51/16](#) is impacted by reclassification into groups [B23D 51/161](#), [B23D 51/1615](#) and [B23D 51/162](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N B23D 51/161
- • {with dynamic balancing}
- WARNING
Group [B23D 51/161](#) is incomplete pending reclassification of documents from group [B23D 51/16](#). Groups [B23D 51/16](#) and [B23D 51/161](#) should be considered in order to perform a complete search.
- N B23D 51/1615
- • {with shock absorbing means}
- WARNING
Group [B23D 51/1615](#) is incomplete pending reclassification of documents from group [B23D 51/16](#). Groups [B23D 51/16](#) and [B23D 51/1615](#) should be considered in order to perform a complete search.
- N B23D 51/162
- • {Stored energy furnished drive in one direction}
- WARNING
Group [B23D 51/162](#) is incomplete pending reclassification of documents from group [B23D 51/16](#). Groups [B23D 51/16](#) and [B23D 51/162](#) should be considered in order to perform a complete search.
- U B23D 53/00** **Machines or devices for sawing with strap saw-blades which are effectively endless in use, e.g. for contour cutting**
- C B23D 53/005
- {with a plurality of band saw blades or band saw blades having plural cutting zones, e.g. contiguous oppositely-moving saw blade portions (for length cutting of trunks [B27B 15/08](#))}
- WARNING
Group [B23D 53/005](#) is impacted by reclassification into groups [B23D 53/0051](#), [B23D 53/0052](#), [B23D 53/0054](#), [B23D 53/0056](#) and [B23D 53/0058](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N B23D 53/0051
- • {Contiguous oppositely moving saw blade portions}
- WARNING
Group [B23D 53/0051](#) is incomplete pending reclassification of documents from group [B23D 53/005](#).
Groups [B23D 53/005](#) and [B23D 53/0051](#) should be considered in order to perform a complete search.
- N B23D 53/0052
- • {with adjustment of separation between cutting zones}
- WARNING
Groups [B23D 53/0052](#), [B23D 53/0054](#) and [B23D 53/0056](#) are incomplete pending reclassification of documents from group [B23D 53/005](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23D 53/0054
- • • {by lever means}
- N B23D 53/0056
- • • {by screw threaded means}
- N B23D 53/0058
- • {including a saw blade assuming a figure 8 during use}
- WARNING
Group [B23D 53/0058](#) is incomplete pending reclassification of documents from group [B23D 53/005](#).
Groups [B23D 53/005](#) and [B23D 53/0058](#) should be considered in order to perform a complete search.
- U B23D 53/02
- with stationarily-mounted wheels, {i.e. during sawing} carrying the strap ([B23D 53/06](#) takes precedence)
- C B23D 53/026
- • {the band saw blade being guided in a horizontal plane}
- WARNING
Group [B23D 53/026](#) is impacted by reclassification into group [B23D 53/028](#).
Groups [B23D 53/026](#) and [B23D 53/028](#) should be considered in order to perform a complete search.
- N B23D 53/028
- • • {with adjustment of distance between band and work support surface}
- WARNING
Group [B23D 53/028](#) is incomplete pending reclassification of documents from group [B23D 53/026](#).
Groups [B23D 53/026](#) and [B23D 53/028](#) should be considered in order to perform a complete search.
- U B23D 53/04
- with the wheels carrying the strap mounted shiftably or swingingly {, i.e. during sawing}, other than merely for adjustment
- C B23D 53/045
- • {with **pivotedly**~~pivotably~~ mounted head carrying the saw wheels}
- WARNING
Group [B23D 53/045](#) is impacted by reclassification into group [B23D 53/049](#).
Groups [B23D 53/045](#) and [B23D 53/049](#) should be considered in order to perform a complete search.
- N B23D 53/049
- • • {Angularly adjustable to cut work at a plurality of different angles}
- WARNING
Group [B23D 53/049](#) is incomplete pending reclassification of documents from group [B23D 53/045](#).
Groups [B23D 53/045](#) and [B23D 53/049](#) should be considered in order to perform a complete search.

- C B23D 55/00** **Sawing machines or sawing devices working with strap saw blades, characterised only by constructional features of particular parts (constructional features of these parts per se [B23Q](#))**
- WARNING**
Group [B23D 55/00](#) is impacted by reclassification into group [B23D 55/122](#). Groups [B23D 55/00](#) and [B23D 55/122](#) should be considered in order to perform a complete search.
- U B23D 55/08 · of devices for guiding or feeding strap saw blades
- C B23D 55/088 · · {Devices for feeding strap saw blades}
- WARNING**
Group [B23D 55/088](#) is impacted by reclassification into group [B23D 55/089](#). Groups [B23D 55/088](#) and [B23D 55/089](#) should be considered in order to perform a complete search.
- N B23D 55/089 · · · {with fluid regulating means for in-feed}
- WARNING**
Group [B23D 55/089](#) is incomplete pending reclassification of documents from group [B23D 55/088](#). Groups [B23D 55/088](#) and [B23D 55/089](#) should be considered in order to perform a complete search.
- C B23D 55/10 · of devices for tensioning strap saw blades ([B23D 55/06](#) takes precedence; incorporated in the strap [B23D 61/12](#))
- WARNING**
Group [B23D 55/10](#) is impacted by reclassification into groups [B23D 55/102](#) and [B23D 55/104](#). Groups [B23D 55/10](#), [B23D 55/102](#) and [B23D 55/104](#) should be considered in order to perform a complete search.
- N B23D 55/102 · · {with means to vary the distance between pulley or sprocket axes}
- WARNING**
Groups [B23D 55/102](#) and [B23D 55/104](#) are incomplete pending reclassification of documents from group [B23D 55/10](#). Groups [B23D 55/10](#), [B23D 55/102](#) and [B23D 55/104](#) should be considered in order to perform a complete search.
- N B23D 55/104 · · · {including means to yieldably bias at least one pulley or sprocket}
- N B23D 55/122 · {of devices for changing angular relationship between pulley or sprocket axes}
- WARNING**
Group [B23D 55/122](#) is incomplete pending reclassification of documents from group [B23D 55/00](#). Groups [B23D 55/00](#) and [B23D 55/122](#) should be considered in order to perform a complete search.
- U B23D 59/00** **Accessories specially designed for sawing machines or sawing devices (lubricating or cooling machine tools in general [B23Q 11/12](#))**
- U B23D 59/001 · {Measuring or control devices, e.g. for automatic control of work feed pressure on band saw blade (measuring in general [G01](#); controlling in general [G05](#))}
- M B23D 59/002 · · {for the position of the saw blade (~~[B27B 5/36](#)~~ and ~~[B27B 9/02](#)~~ take precedence mounting for swiveling or tilting a circular saw blade [B27B 5/36](#); portable power-driven circular saws with adjustment for cutting depth or amount of tilting [B27B 9/02](#))}

- C B23D 59/006 · {for removing or collecting chips}
- WARNING**
 Group [B23D 59/006](#) is impacted by reclassification into groups [B23D 59/0062](#) and [B23D 59/0064](#).
 Groups [B23D 59/006](#), [B23D 59/0062](#) and [B23D 59/0064](#) should be considered in order to perform a complete search.
- N B23D 59/0062 · · {by blowing}
- WARNING**
 Group [B23D 59/0062](#) is incomplete pending reclassification of documents from group [B23D 59/006](#).
 Groups [B23D 59/006](#) and [B23D 59/0062](#) should be considered in order to perform a complete search.
- N B23D 59/0064 · · {by suction}
- WARNING**
 Group [B23D 59/0064](#) is incomplete pending reclassification of documents from group [B23D 59/006](#).
 Groups [B23D 59/006](#) and [B23D 59/0064](#) should be considered in order to perform a complete search.
- U B23D 61/00 Tools for sawing machines or sawing devices (tools for trepanning [B23B 51/04](#)); Clamping devices for these tools**
- C B23D 61/02 · Circular saw blades
- WARNING**
 Group [B23D 61/02](#) is impacted by reclassification into groups [B23D 61/022](#), [B23D 61/0225](#), [B23D 61/027](#) and [B23D 61/0275](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- C B23D 61/021 · · {Types of set; Variable teeth, e.g. variable in height or gullet depth: **Varying pitch**; **Varying pitch**; Details of gullet}
- WARNING**
 Group [B23D 61/021](#) is impacted by reclassification into groups [B23D 61/0212](#), [B23D 61/0214](#) and [B23D 61/0225](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N B23D 61/0212 · · · {Varying pitch}
- WARNING**
 Group [B23D 61/0212](#) is incomplete pending reclassification of documents from group [B23D 61/021](#).
 Groups [B23D 61/021](#) and [B23D 61/0212](#) should be considered in order to perform a complete search.
- N B23D 61/0214 · · · {Varying tooth height}
- WARNING**
 Group [B23D 61/0214](#) is incomplete pending reclassification of documents from group [B23D 61/021](#).
 Groups [B23D 61/021](#) and [B23D 61/0214](#) should be considered in order to perform a complete search.

- N B23D 61/022
- • {with depth limiter on the saw blade}
- WARNING
Group [B23D 61/022](#) is incomplete pending reclassification of documents from group [B23D 61/02](#).
Groups [B23D 61/02](#) and [B23D 61/022](#) should be considered in order to perform a complete search.
- N B23D 61/0225
- • {with teeth having transversely curved cutting edges}
- WARNING
Group [B23D 61/0225](#) is incomplete pending reclassification of documents from groups [B23D 61/02](#) and [B23D 61/021](#).
Groups [B23D 61/02](#), [B23D 61/021](#) and [B23D 61/0225](#) should be considered in order to perform a complete search.
- C B23D 61/025
- • {Details of saw blade body}
- WARNING
Group [B23D 61/025](#) is impacted by reclassification into groups [B23D 61/027](#) and [B23D 61/0275](#).
Groups [B23D 61/025](#), [B23D 61/027](#) and [B23D 61/0275](#) should be considered in order to perform a complete search.
- M B23D 61/026
- • • {Composite body, e.g. laminated, ~~body of diverse material~~}
- N B23D 61/027
- • • {Element on or along a side of the saw blade for clearing or widening kerf}
- WARNING
Group [B23D 61/027](#) is incomplete pending reclassification of documents from groups [B23D 61/02](#) and [B23D 61/025](#).
Groups [B23D 61/02](#), [B23D 61/025](#) and [B23D 61/027](#) should be considered in order to perform a complete search.
- N B23D 61/0275
- • • {Slots in the saw blade body for reducing tension or vibration}
- WARNING
Group [B23D 61/0275](#) is incomplete pending reclassification of documents from groups [B23D 61/02](#) and [B23D 61/025](#).
Groups [B23D 61/02](#), [B23D 61/025](#) and [B23D 61/0275](#) should be considered in order to perform a complete search.
- C B23D 61/04
- • with inserted saw teeth {, i.e. the teeth being individually inserted}
- WARNING
Group [B23D 61/04](#) is impacted by reclassification into groups [B23D 61/071](#), [B23D 61/075](#) and [B23D 65/045](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C B23D 61/06
- • • in exchangeable arrangement
- WARNING
Group [B23D 61/06](#) is impacted by reclassification into groups [B23D 61/071](#), [B23D 61/075](#) and [B23D 65/045](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C B23D 61/065
- • • • {Adjustable teeth}
- WARNING
Group [B23D 61/065](#) is impacted by reclassification into groups [B23D 61/071](#), [B23D 61/075](#) and [B23D 65/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B23D 61/071
- • • {with teeth connected by independent connecting elements}
- WARNING
Group [B23D 61/071](#) is incomplete pending reclassification of documents from groups [B23D 61/04](#), [B23D 61/06](#) and [B23D 61/065](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23D 61/075
- • • {with teeth connected by deformation}
- WARNING
Group [B23D 61/075](#) is incomplete pending reclassification of documents from groups [B23D 61/04](#), [B23D 61/06](#) and [B23D 61/065](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C B23D 61/12
- Straight saw blades; Strap saw blades
- WARNING
Group [B23D 61/12](#) is impacted by reclassification into groups [B23D 61/1217](#), [B23D 61/1218](#), [B23D 61/1219](#), [B23D 61/124](#) and [B23D 61/1265](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C B23D 61/121
- {Types of set; Variable teeth, e.g. variable in height or gullet depth; Varying pitch; Details of gullet}
- WARNING
Group [B23D 61/121](#) is impacted by reclassification into groups [B23D 61/1212](#), [B23D 61/1214](#), [B23D 61/1216](#), [B23D 61/1217](#), [B23D 61/1219](#) and [B23D 61/1265](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23D 61/1212
- • • {Varying pitch}
- WARNING
Group [B23D 61/1212](#) is incomplete pending reclassification of documents from group [B23D 61/121](#).
Groups [B23D 61/121](#) and [B23D 61/1212](#) should be considered in order to perform a complete search.
- N B23D 61/1214
- • • {Varying height}
- WARNING
Group [B23D 61/1214](#) is incomplete pending reclassification of documents from group [B23D 61/121](#).
Groups [B23D 61/121](#) and [B23D 61/1214](#) should be considered in order to perform a complete search.
- N B23D 61/1216
- • • {Repeating pattern of groups having three or more teeth}
- WARNING
Group [B23D 61/1216](#) is incomplete pending reclassification of documents from group [B23D 61/121](#).
Groups [B23D 61/121](#) and [B23D 61/1216](#) should be considered in order to perform a complete search.

- N B23D 61/1217
- • • {Reciprocating blades having more than one section of unique teeth on one side, e.g. a fine tooth section and a large tooth section}
- WARNING
Group [B23D 61/1217](#) is incomplete pending reclassification of documents from groups [B23D 61/12](#) and [B23D 61/121](#).
Groups [B23D 61/12](#), [B23D 61/121](#) and [B23D 61/1217](#) should be considered in order to perform a complete search.
- N B23D 61/1218
- • {with a depth limiter on the saw blade}
- WARNING
Group [B23D 61/1218](#) is incomplete pending reclassification of documents from group [B23D 61/12](#).
Groups [B23D 61/12](#) and [B23D 61/1218](#) should be considered in order to perform a complete search.
- N B23D 61/1219
- • {with teeth having transversely curved cutting edges}
- WARNING
Group [B23D 61/1219](#) is incomplete pending reclassification of documents from groups [B23D 61/12](#) and [B23D 61/121](#).
Groups [B23D 61/12](#), [B23D 61/121](#) and [B23D 61/1219](#) should be considered in order to perform a complete search.
- C B23D 61/123
- • {Details of saw blade body}
- WARNING
Group [B23D 61/123](#) is impacted by reclassification into groups [B23D 61/124](#) and [B23D 61/1245](#).
Groups [B23D 61/123](#), [B23D 61/124](#) and [B23D 61/1245](#) should be considered in order to perform a complete search.
- N B23D 61/124
- • • {Element on a side of the saw blade for clearing or widening kerf}
- WARNING
Group [B23D 61/124](#) is incomplete pending reclassification of documents from groups [B23D 61/12](#) and [B23D 61/123](#).
Groups [B23D 61/12](#), [B23D 61/123](#) and [B23D 61/124](#) should be considered in order to perform a complete search.
- N B23D 61/1245
- • • {Slots in the saw blade body for reducing tension or vibration}
- WARNING
Group [B23D 61/1245](#) is incomplete pending reclassification of documents from group [B23D 61/123](#).
Groups [B23D 61/123](#) and [B23D 61/1245](#) should be considered in order to perform a complete search.
- M B23D 61/125
- • • {Composite body, e.g. laminated, ~~body of diverse material~~}
- C B23D 61/126
- • {having cutting teeth along both edges}
- WARNING
Group [B23D 61/126](#) is impacted by reclassification into group [B23D 61/1265](#).
Groups [B23D 61/126](#) and [B23D 61/1265](#) should be considered in order to perform a complete search.
- N B23D 61/1265
- • {Reciprocating blades with teeth on the saw nose, e.g. plunge cutters}
- WARNING
Group [B23D 61/1265](#) is incomplete pending reclassification of documents from groups [B23D 61/12](#), [B23D 61/121](#) and [B23D 61/126](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- C B23D 61/14 • • with inserted saw teeth {, i.e. the teeth being individually inserted}

WARNING

Group [B23D 61/14](#) is impacted by reclassification into groups [B23D 61/171](#), [B23D 61/175](#) and [B23D 65/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- C B23D 61/16 • • • in exchangeable arrangement

WARNING

Group [B23D 61/16](#) is impacted by reclassification into groups [B23D 61/171](#), [B23D 61/175](#) and [B23D 65/045](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B23D 61/171 • • • {with teeth connected by independent connecting elements}

WARNING

Group [B23D 61/171](#) is incomplete pending reclassification of documents from groups [B23D 61/14](#) and [B23D 61/16](#).

Groups [B23D 61/14](#), [B23D 61/16](#) and [B23D 61/171](#) should be considered in order to perform a complete search.

- N B23D 61/175 • • • {with teeth connected by deformation}

WARNING

Group [B23D 61/175](#) is incomplete pending reclassification of documents from groups [B23D 61/14](#) and [B23D 61/16](#).

Groups [B23D 61/14](#), [B23D 61/16](#) and [B23D 61/175](#) should be considered in order to perform a complete search.

- C B23D 63/00 **Dressing the tools of sawing machines or sawing devices for use in cutting any kind of material, e.g. in the manufacture of sawing tools**

WARNING

Group [B23D 63/00](#) is impacted by reclassification into groups [B23D 63/042](#), [B23D 63/044](#), [B23D 63/046](#) and [B23D 63/072](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- C B23D 63/005 • {Workpiece indexing equipment specially adapted to form part of sawing tool dressing machines}

WARNING

Group [B23D 63/005](#) is impacted by reclassification into group [B23D 63/0055](#).

Groups [B23D 63/005](#) and [B23D 63/0055](#) should be considered in order to perform a complete search.

- N B23D 63/0055 • • {with tooth engaging feed}

WARNING

Group [B23D 63/0055](#) is incomplete pending reclassification of documents from group [B23D 63/005](#).

Groups [B23D 63/005](#) and [B23D 63/0055](#) should be considered in order to perform a complete search.

- C B23D 63/02
- Setting saw teeth by means of hand-operated {or foot-operated} devices {(B23D 63/006 takes precedence)}
- WARNING
Group B23D 63/02 is impacted by reclassification into group B23D 63/028. Groups B23D 63/02 and B23D 63/028 should be considered in order to perform a complete search.
- C B23D 63/023
- {Devices of the portable type carried by one hand and operable by one hand or two hands, e.g. having a pair of tongs}
- WARNING
Group B23D 63/023 is impacted by reclassification into groups B23D 63/028 and B23D 63/046. Groups B23D 63/023, B23D 63/028 and B23D 63/046 should be considered in order to perform a complete search.
- U B23D 63/026
- {Foot-operated devices}
- N B23D 63/028
- {with screw-operated setting}
- WARNING
Group B23D 63/028 is incomplete pending reclassification of documents from groups B23D 63/02 and B23D 63/023. Groups B23D 63/02, B23D 63/023 and B23D 63/028 should be considered in order to perform a complete search.
- C B23D 63/04
- Setting saw teeth of circular, straight, or strap saw blades by means of power-operated devices {(B23D 63/006 takes precedence)}
- WARNING
Group B23D 63/04 is impacted by reclassification into groups B23D 63/042, B23D 63/044 and B23D 63/046. All groups listed in this Warning should be considered in order to perform a complete search.
- N B23D 63/042
- {Setting saw teeth by pivotably-operated setting devices}
- WARNING
Group B23D 63/042 is incomplete pending reclassification of documents from groups B23D 63/00 and B23D 63/04. Groups B23D 63/00, B23D 63/04 and B23D 63/042 should be considered in order to perform a complete search.
- N B23D 63/044
- {Setting saw teeth by slidably-operated setting devices}
- WARNING
Group B23D 63/044 is incomplete pending reclassification of documents from groups B23D 63/00 and B23D 63/04. Groups B23D 63/00, B23D 63/04 and B23D 63/044 should be considered in order to perform a complete search.
- N B23D 63/046
- {Tooth embracing; Anvil-free setting}
- WARNING
Group B23D 63/046 is incomplete pending reclassification of documents from groups B23D 63/00, B23D 63/023 and B23D 63/04. All groups listed in this Warning should be considered in order to perform a complete search.
- U B23D 63/06
- Upsetting the cutting edges of saw teeth, e.g. swaging

- N B23D 63/072 · {Jointing}
- WARNING
Group [B23D 63/072](#) is incomplete pending reclassification of documents from group [B23D 63/00](#).
Groups [B23D 63/00](#) and [B23D 63/072](#) should be considered in order to perform a complete search.
- C B23D 65/00 **Making tools for sawing machines or sawing devices for use in cutting any kind of material**
- WARNING
Group [B23D 65/00](#) is impacted by reclassification into group [B23D 65/045](#).
Groups [B23D 65/00](#) and [B23D 65/045](#) should be considered in order to perform a complete search.
- U B23D 65/04 · Making saw teeth by milling
- N B23D 65/045 · {Making saw blades by using tooth inserters}
- WARNING
Group [B23D 65/045](#) is incomplete pending reclassification of documents from groups [B23D 61/04](#), [B23D 61/06](#), [B23D 61/065](#), [B23D 61/14](#), [B23D 61/16](#) and [B23D 65/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP10457 (B27B)

- U B27B 5/00 **Sawing machines working with circular {or cylindrical} saw blades (for length sawing of trunks [B27B 7/00](#)); Components or equipment therefor**
- M B27B 5/12 · Cylinder saws {(~~B27C 1/007 takes precedence~~ machine for producing flat surfaces by cutting through a workpiece with a tool having a rotational vector parallel to the surfaces generated by cutting [B27C 1/007](#))}
- U B27B 5/29 · Details; Component parts; Accessories
- C B27B 5/38 · · Devices for braking the circular saw blade or the saw spindle; Devices for damping vibrations of the circular saw blade, e.g. silencing {(~~B23D 47/005 takes precedence~~ vibration-damping of sawing machines or devices working with circular saw blades [B23D 47/005](#))}
- WARNING
Group [B27B 5/38](#) is impacted by reclassification into groups [B27B 5/381](#), [B27G 19/008](#) and [B27G 19/022](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B27B 5/381 · · · {with at least one brake member contacting saw blade portions}
- WARNING
Group [B27B 5/381](#) is incomplete pending reclassification of documents from group [B27B 5/38](#).
Groups [B27B 5/38](#) and [B27B 5/381](#) should be considered in order to perform a complete search.
- U B27B 13/00 **Band or strap sawing machines (for length cutting of trunks [B27B 15/00](#)); Components or equipment therefor**
- M B27B 13/08 · Arrangements for stretching the band saw blade {(~~B23D 55/10 takes precedence~~ devices for tensioning strap saw blades of sawing machines [B23D 55/10](#))}

- M B27B 13/10
- Guiding equipment for the band saw blade, e.g. guide rollers, back guides, side guides ~~{(B23D-55/08 takes precedence devices for guiding or feeding strap saw blades to sawing machines B23D 55/08)}~~
- C B27B 13/14
- Braking devices specially designed for band sawing machines, e.g. acting after damage of the band saw blade
- WARNING**
 Group [B27B 13/14](#) is impacted by reclassification into groups [B27B 13/141](#) and [B27G 19/008](#).
 Groups [B27B 13/14](#), [B27B 13/141](#) and [B27G 19/008](#) should be considered in order to perform a complete search.
- N B27B 13/141
- {with at least one brake member contacting saw blade portions}
- WARNING**
 Group [B27B 13/141](#) is incomplete pending reclassification of documents from group [B27B 13/14](#).
 Groups [B27B 13/14](#) and [B27B 13/141](#) should be considered in order to perform a complete search.
- U B27B 17/00**
- Chain saws; Equipment therefor {(slotting or mortising machines equipped with chain cutters [B27F 5/06](#))}**
- C B27B 17/14
- Arrangements for stretching the chain saw
- WARNING**
 Group [B27B 17/14](#) is impacted by reclassification into groups [B27B 17/142](#), [B27B 17/144](#) and [B27B 17/146](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N B27B 17/142
- {with adjustment by at least one cam}
- WARNING**
 Group [B27B 17/142](#) is incomplete pending reclassification of documents from group [B27B 17/14](#).
 Groups [B27B 17/14](#) and [B27B 17/142](#) should be considered in order to perform a complete search.
- N B27B 17/144
- {with adjustment by at least one threaded screw}
- WARNING**
 Group [B27B 17/144](#) is incomplete pending reclassification of documents from group [B27B 17/14](#).
 Groups [B27B 17/14](#) and [B27B 17/144](#) should be considered in order to perform a complete search.
- N B27B 17/146
- {with adjustment of a non-driven sprocket or pulley relative to the guide bar}
- WARNING**
 Group [B27B 17/146](#) is incomplete pending reclassification of documents from group [B27B 17/14](#).
 Groups [B27B 17/14](#) and [B27B 17/146](#) should be considered in order to perform a complete search.

Project: RP10457 (B27G)

- M B27G** **ACCESSORY MACHINES OR APPARATUS FOR WORKING WOOD OR SIMILAR MATERIALS; TOOLS FOR WORKING WOOD OR SIMILAR MATERIALS (tools for grinding [B24D](#); sawing tools [B27B 33/00](#); tools for slotting or mortising machines [B27F 5/02](#); tools for the manufacture of wood shavings, chips, powder or the like [B27L 11/00](#)); SAFETY DEVICES FOR WOOD WORKING MACHINES OR TOOLS**
- WARNINGS
- The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
[B27G 17/08](#) covered by [B25D 3/00](#)
 - {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}
- U B27G 5/00** **Machines or devices for working mitre joints with even abutting ends**
- M B27G 5/02** • for sawing mitre joints; Mitre boxes (guide fences for timber in sawing machines [B27B 27/06](#)[B27B 27/00](#))
- C B27G 19/00** **Safety guards or devices specially adapted for wood saws; Auxiliary devices facilitating proper operation of wood saws**
- WARNING
Group [B27G 19/00](#) is impacted by reclassification into group [B27G 19/008](#). Groups [B27G 19/00](#) and [B27G 19/008](#) should be considered in order to perform a complete search.
- U B27G 19/006** • {for reciprocating saws}
- N B27G 19/008** • {with sensing of human contact or proximity with the blade}
- WARNING
Group [B27G 19/008](#) is incomplete pending reclassification of documents from groups [B27B 5/38](#), [B27B 13/14](#), [B27G 19/00](#), [B27G 19/02](#) and [B27G 19/06](#). All groups listed in this Warning should be considered in order to perform a complete search.
- C B27G 19/02** • for circular saws
- WARNING
Group [B27G 19/02](#) is impacted by reclassification into groups [B27G 19/008](#), [B27G 19/022](#), [B27G 19/025](#) and [B27G 19/028](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N B27G 19/022** • {with blades dropping below a table in reaction to dangerous situation}
- WARNING
Group [B27G 19/022](#) is incomplete pending reclassification of documents from groups [B27B 5/38](#) and [B27G 19/02](#). Groups [B27B 5/38](#), [B27G 19/02](#) and [B27G 19/022](#) should be considered in order to perform a complete search.
- N B27G 19/025** • {with guards for tool}
- WARNING
Group [B27G 19/025](#) is incomplete pending reclassification of documents from group [B27G 19/02](#). Groups [B27G 19/02](#) and [B27G 19/025](#) should be considered in order to perform a complete search.

- N B27G 19/028
- • {Anti-kickback pawls}
- WARNING
Group [B27G 19/028](#) is incomplete pending reclassification of documents from group [B27G 19/02](#).
Groups [B27G 19/02](#) and [B27G 19/028](#) should be considered in order to perform a complete search.
- C B27G 19/06
- for band or strap saws
- WARNING
Group [B27G 19/06](#) is impacted by reclassification into group [B27G 19/008](#).
Groups [B27G 19/06](#) and [B27G 19/008](#) should be considered in order to perform a complete search.
- M B27G 23/00
- Gauging means specially designed for adjusting of tools or guides, e.g. adjusting cutting blades in cutter blocks (~~{B23Q 17/22 takes precedence; boring templates B23B 49/02;}~~ *{arrangements for indicating or measuring existing or desired position of tool B23Q 17/22;}* for arrangement on manually operated saws [B27B 21/08](#); for guides of sawing machines [B27B 27/00](#))

Project: RP11529 (B41J)

- U B41J 2/00
- Typewriters or selective printing mechanisms characterised by the printing or marking process for which they are designed (mounting, arrangement or disposition of types or dies [B41J 1/00](#))
- NOTES
1. This group covers devices reproducing only a discrete number of tones, whereas group [H04N 1/00](#) covers devices used for the reproduction of documents or the like, which devices are capable of reproducing continuous tone value scales.
 2. In this group, the following expressions are used with the meanings indicated:
 - "ink jet" involves the projection of ink on to the printing material, e.g. paper, through a nozzle as a stream of droplets or particles of colouring matter
 - "continuous ink jet" means a jet of ink transformed into a continuous stream of droplets or particles of colouring matter after having left the nozzle
 - "ink spray" means a spray of ink transported by a stream of charged particles or air on to the printing material
- U B41J 2/005
- characterised by bringing liquid or particles selectively into contact with a printing material (printing by selective application of impact or pressure on a printing or impression-transfer material [B41J 2/22](#))
- U B41J 2/01
- • Ink jet
- U B41J 2/135
- • • Nozzles
- M B41J 2/165
- • • • Preventing ~~{or detecting}~~ *Prevention {or detection}* of nozzle clogging, e.g. cleaning, capping or moistening for nozzles
- D B41J 2002/16502
- • • • {~~Printhead constructions to prevent nozzle clogging or facilitate nozzle cleaning~~}
- <administratively transferred to [B41J 2/16502](#) INV>
- N B41J 2/16502
- • • • {*Printhead constructions to prevent nozzle clogging or facilitate nozzle cleaning*}
- C B41J 2/16505
- • • • {Caps, spittoons or covers for cleaning or preventing drying out}
- WARNING
Group [B41J 2/16505](#) is impacted by reclassification into groups [B41J 2/16507](#) and [B41J 2/16508](#).

Groups [B41J 2/16505](#), [B41J 2/16507](#) and [B41J 2/16508](#) should be considered in order to perform a complete search.

- N B41J 2/16507 {integral with the printhead}
WARNING
*Group [B41J 2/16507](#) is incomplete pending reclassification of documents from group [B41J 2/16505](#).
Groups [B41J 2/16505](#) and [B41J 2/16507](#) should be considered in order to perform a complete search.*

- M B41J 2/16508 {connected with the printer frame}
WARNING
*Group [B41J 2/16508](#) is incomplete pending reclassification of documents from group [B41J 2/16505](#).
Groups [B41J 2/16505](#) and [B41J 2/16508](#) should be considered in order to perform a complete search.*

- U B41J 2/16511 {Constructions for cap positioning ([B41J 2/16547](#) takes precedence)}
- D B41J 2002/16514 {~~creating a distance between cap and print head, e.g. for suction or pressurising~~
<administratively transferred to [B41J 2/16514](#) INV>
- N B41J 2/16514 {~~creating a distance between cap and printhead, e.g. for suction or pressurising~~
- U B41J 2/16517 {Cleaning of print head nozzles ([B41J 2/16505](#), [B41J 2/1707](#) take precedence)}
- U B41J 2/1652 {by driving a fluid through the nozzles to the outside thereof, e.g. by applying pressure to the inside or vacuum at the outside of the print head}
- C B41J 2/16523 {Waste ink ~~collection~~*transport* from caps or spittoons, e.g. by suction (*Collecting or collectors of waste ink [B41J 2/1721](#)*)}
WARNING
*Group [B41J 2/16523](#) is impacted by reclassification into group [B41J 2/1721](#).
Groups [B41J 2/16523](#) and [B41J 2/1721](#) should be considered in order to perform a complete search.*

- U B41J 2/16526 {by applying pressure only}
- D B41J 2002/16529 {~~Idle discharge on printing matter~~
<administratively transferred to [B41J 2/16529](#) INV>
- N B41J 2/16529 {~~Idle discharge on printing matter~~}
- U B41J 2/17 characterised by ink handling {(cleaning by driving a fluid through the nozzles to the outside thereof [B41J 2/1652](#); for treating before, during or after printing or for uniform coating or laminating the copy material before or after printing [B41J 11/0015](#))}
- M B41J 2/1721 {Collecting waste ink; Collectors therefor}
WARNING
*Group [B41J 2/1721](#) is incomplete pending reclassification of documents from group [B41J 2/16523](#).
Groups [B41J 2/16523](#) and [B41J 2/1721](#) should be considered in order to perform a complete search.*

- D B41J 2002/1728 {Closed waste ink collector}
<administratively transferred to [B41J 2/1728](#) INV>
- N B41J 2/1728 {Closed waste ink collectors}
- D B41J 2002/1735 {Closed waste ink collector with ink supply tank in common container}
<administratively transferred to [B41J 2/1735](#) INV>
- N B41J 2/1735 {with ink supply tank in common containers}
- D B41J 2002/1742 {Open waste ink collector, e.g. ink receiving from a print head above the collector during borderless printing}
<administratively transferred to [B41J 2/1742](#) INV>
- N B41J 2/1742 {Open waste ink collectors, e.g. ink receiving from a print head above the collector during borderless printing}
- U B41J 2/21 . . . for multi-colour printing
- U B41J 2/2107 {characterised by the ink properties (supplying ink in a solid state [B41J 2/17593](#))}
- M B41J 2/211 {Mixing of inks, solvent or air prior to paper contact}
- WARNING**
Group [B41J 2/211](#) is incomplete pending reclassification of documents from group [B41J 2/2114](#). Groups [B41J 2/211](#) and [B41J 2/2114](#) should be considered in order to perform a complete search.
- C B41J 2/2114 {Ejecting ~~transparent or white coloured~~ specialized liquids, e.g. ~~transparent or~~ processing liquids ([B41J 2/211](#) takes precedence)}
- WARNING**
Group [B41J 2/2114](#) is impacted by reclassification into groups [B41J 2/211](#) and [B41J 2/2117](#). Groups [B41J 2/211](#), [B41J 2/2114](#) and [B41J 2/2117](#) should be considered in order to perform a complete search.
- M B41J 2/2117 {Ejecting white liquids}
- WARNING**
Group [B41J 2/2117](#) is incomplete pending reclassification of documents from group [B41J 2/2114](#). Groups [B41J 2/2114](#) and [B41J 2/2117](#) should be considered in order to perform a complete search.

Project: RP11777-C (B64G)

- U B64G 1/00 Cosmonautic vehicles**
- U B64G 1/10 . . . Artificial satellites; Systems of such satellites; Interplanetary vehicles (space shuttles [B64G 1/14](#))
- C B64G 1/1078 . . {Maintenance satellites (refueling in space [B64G 1/4024](#))}
- WARNING**
Group [B64G 1/1078](#) is impacted by reclassification into ~~group~~ *groups* [B64G 1/1081](#) and [B64G 1/4024](#). Groups ~~[B64G 1/1078](#)~~ *and*, [B64G 1/1081](#) and [B64G 1/4024](#) should be considered in order to perform a complete search.
- U B64G 1/22 . . . Parts of, or equipment specially adapted for fitting in or to, cosmonautic vehicles

- U B64G 1/40
- • Arrangements or adaptations of propulsion systems
- WARNING
Group [B64G 1/40](#) is impacted by reclassification into group [B64G 1/4005](#). Groups [B64G 1/40](#) and [B64G 1/4005](#) should be considered in order to perform a complete search.
- U B64G 1/402
- • • {Propellant tanks; Feeding propellants}
- WARNING
Group [B64G 1/402](#) is impacted by reclassification into groups [B64G 1/4021](#), [B64G 1/4022](#), [B64G 1/4024](#) and [B64G 1/4026](#). All groups listed in this Warning should be considered in order to perform a complete search.
- M B64G 1/4024
- • • • {Refueling in space}
- WARNING
Group [B64G 1/4024](#) is incomplete pending reclassification of documents from ~~group~~groups [B64G 1/1078](#) and [B64G 1/402](#). Groups [B64G 1/1078](#), [B64G 1/402](#) and [B64G 1/4024](#) should be considered in order to perform a complete search.

Project: Unknown (C)**C****CHEMISTRY; METALLURGY**NOTES

1. In section [C](#), the definitions of groups of chemical elements are as follows:

Alkali metals: Li, Na, K, Rb, Cs, Fr

Alkaline earth metals: Ca, Sr, Ba, Ra

Lanthanides: elements with atomic numbers 57 to 71 inclusive

Rare earths: Sc, Y, Lanthanides

Actinides: elements with atomic numbers 89 to 103 inclusive

Refractory metals: Ti, V, Cr, Zr, Nb, Mo, Hf, Ta, W

Halogens: F, Cl, Br, I, At

Noble gases: He, Ne, Ar, Kr, Xe, Rn

Platinum group: Os, Ir, Pt, Ru, Rh, Pd

Noble metals: Ag, Au, Platinum group

Light metals: alkali metals, alkaline earth metals, Be, Al, Mg

Heavy metals: metals other than light metals

Iron group: Fe, Co, Ni

Non-metals: H, B, C, Si, N, P, O, S, Se, Te, noble gases, halogens

Metals: elements other than non-metals

Transition elements: elements with atomic numbers 21 to 30 inclusive, 39 to 48 inclusive, 57 to 80 inclusive, 89 upwards

2. Section [C](#) covers:

- a. pure chemistry, which covers inorganic compounds, organic compounds, macromolecular compounds, and their methods of preparation;
- b. applied chemistry, which covers compositions containing the above compounds, such as: glass, ceramics, fertilisers, plastics compositions, paints, products of the petroleum industry. It also covers certain compositions on account of their having particular properties rendering them suitable for certain purposes, as in the case of explosives, dyestuffs, adhesives, lubricants and detergents;
- c. certain marginal industries, such as the manufacture of coke and of solid or gaseous fuels, the production and refining of oils, fats and waxes, the fermentation industry (e.g., brewing and wine-making), the sugar industry;

- d. certain operations or treatments, which are either purely mechanical, e.g., the mechanical treatment of leather and skins, or partly mechanical, e.g., the treatment of water or the prevention of corrosion in general;
- e. metallurgy, ferrous or non-ferrous alloys.
3. In all sections of the CPC, in the absence of an indication to the contrary, the Periodic Table of chemical elements referred to is the one with 18 groups as represented in the table below.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	IA	IIA	IIIB	IVB	VB	VIB	VII	[---VIIIB---	IB	IIB	IIIA	IVA	VA	VIA	VIIA	VIIIA	VIIIA	
Period/ Période																		
1	H																	He
2	Li	Be											B	C	N	O	F	Ne
3	Na	Mg											Al	Si	P	S	Cl	Ar
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
6	Cs	Ba	Lanthanides	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
7	Fr	Ra	Actinides	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og
			Lanthanides	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
			Actinides	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

4. In the case of operations, treatments, products or articles having both a chemical and a non-chemical part or aspect, the general rule is that the chemical part or aspect is covered by section C.

4.

- a. In the case of operations, treatments, products or articles having both a chemical and a non-chemical part or aspect, the general rule is that the chemical part or aspect is covered by section C.
- b. In some of these cases, the chemical part or aspect brings with it a non-chemical one, even though purely mechanical, because this latter aspect either is essential to the operation or treatment or constitutes an important element thereof. It has seemed, in fact, more logical not to dissociate the different parts or aspects of a coherent whole. This is the case for applied chemistry and for the industries, operations and treatments mentioned in Notes (2) c), d) and e). For example, furnaces peculiar to the manufacture of glass are covered by class C03 and not by class F27.
- c. There are, however, some exceptions in which the mechanical (or non-chemical) aspect carries with it the chemical aspect, for example:
- certain extractive processes, in subclass A61K;
 - the chemical purification of air, in subclass A61L;
 - chemical methods of fire-fighting, in subclass A62D;
 - chemical processes and apparatus, in class B01;
 - impregnation of wood, in subclass B27K;
 - chemical methods of analysis or testing, in subclass G01N;
 - photographic materials and processes, in class G03, and, generally, the chemical treatment of textiles and the production of cellulose or paper, in section D.
- d. In still other cases, the pure chemical aspect is covered by section C and the applied chemical aspect by another section, such as A, B or E, e.g. the use of a substance or composition for:
- treatment of plants or animals, covered by subclass A01N;
 - foodstuffs, covered by class A23;
 - ammunition or explosives, covered by class F42.
- e. When the chemical and mechanical aspects are so closely interlocked that a neat and simple division is not possible, or when certain mechanical processes follow as a natural or logical continuation of a chemical treatment, section C may cover, in addition to the chemical aspect, a part only of the mechanical aspect, e.g., after-treatment of artificial stone, covered by class C04. In this latter case, a note or a reference is usually

given to make the position clear, even if sometimes the division is rather arbitrary.

5. In some of these cases, the chemical part or aspect brings with it a non-chemical one, even though purely mechanical, because this latter aspect either is essential to the operation or treatment or constitutes an important element thereof. It has seemed, in fact, more logical not to dissociate the different parts or aspects of a coherent whole. This is the case for applied chemistry and for the industries, operations and treatments mentioned in Note (2) bullets 2, 3, 4 and 5. For example, furnaces peculiar to the manufacture of glass are covered by class [C03](#) and not by class [F27](#).

6. There are, however, some exceptions in which the mechanical (or non-chemical) aspect carries with it the chemical aspect, for example:

- certain extractive processes, in subclass [A61K](#);
- the chemical purification of air, in subclass [A61L](#);
- chemical methods of fire-fighting, in subclass [A62D](#);
- chemical processes and apparatus, in class [B01](#);
- impregnation of wood, in subclass [B27K](#);
- chemical methods of analysis or testing, in subclass [G01N](#);
- photographic materials and processes, in class [G03](#), and, generally, the chemical treatment of textiles and the production of cellulose or paper, in section [D](#).

7. In still other cases, the pure chemical aspect is covered by section [C](#) and the applied chemical aspect by another section, such as [A](#), [B](#) or [F](#), e.g., the use of a substance or composition for:

- treatment of plants or animals, covered by subclass [A01N](#);
- foodstuffs, covered by class [A23](#);
- ammunition or explosives, covered by class [F42](#).

8. When the chemical and mechanical aspects are so closely interlocked that a neat and simple division is not possible, or when certain mechanical processes follow as a natural or logical continuation of a chemical treatment, section [C](#) may cover, in addition to the chemical aspect, a part only of the mechanical aspect, e.g., after-treatment of artificial stone, covered by class [C04](#). In this latter case, a note or a reference is usually given to make the position clear, even if sometimes the division is rather arbitrary.

Project: RP10451-F (C23C)

M C23C 2/00

Hot-dipping or immersion processes for applying the coating material in the molten state without affecting the shape; Apparatus therefor

WARNING

~~Group C23C 2/00 is impacted by reclassification into groups C23C 2/325, C23C 2/50 – C23C 2/544.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C23C 2/003

• {Apparatus}

WARNING

~~Group C23C 2/003 is impacted by reclassification into groups C23C 2/0032 – C23C 2/004, C23C 2/325, C23C 2/50 – C23C 2/544.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

- M C23C 2/0032
- {specially adapted for batch coating of substrate}
- WARNING**
Groups C23C 2/0032 and C23C 2/00322 are incomplete pending reclassification of documents from groups C23C 2/003, C23C 2/006 and C23C 2/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C23C 2/0034
- {Details related to elements immersed in bath}
- WARNING**
Groups C23C 2/0034 – C23C 2/00348 are incomplete pending reclassification of documents from groups C23C 2/003, C23C 2/006 and C23C 2/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C23C 2/0035
- {Means for continuously moving substrate through, into or out of the bath (C23C 2/00344 takes precedence)}
- WARNING**
Group C23C 2/0035 is incomplete pending reclassification of documents from groups C23C 2/003, C23C 2/006 and C23C 2/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C23C 2/0036
- {Crucibles}
- WARNING**
Groups C23C 2/0036 – C23C 2/00362 are incomplete pending reclassification of documents from groups C23C 2/003, C23C 2/006 and C23C 2/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C23C 2/0038
- {characterised by the pre-treatment chambers located immediately upstream of the bath or occurring locally before the dipping process}
- WARNING**
Groups C23C 2/0038 and C23C 2/004 are incomplete pending reclassification of documents from groups C23C 2/003, C23C 2/006 and C23C 2/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C23C 2/006
- {Pattern or selective deposits}
- WARNING**
Group C23C 2/006 is impacted by reclassification into groups C23C 2/0032, C23C 2/00322, C23C 2/0034, C23C 2/00342, C23C 2/00344, C23C 2/00348, C23C 2/0035, C23C 2/0036, C23C 2/00361, C23C 2/00362, C23C 2/0038, C23C 2/004, C23C 2/0062, C23C 2/0064, C23C 2/50, C23C 2/51, C23C 2/52, C23C 2/521, C23C 2/522, C23C 2/523, C23C 2/524, C23C 2/5245, C23C 2/525, C23C 2/526, C23C 2/54, C23C 2/542 and C23C 2/544.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C23C 2/0062
- {without pre-treatment of the material to be coated, e.g. using masking elements such as casings, shields, fixtures or blocking elements}
- WARNING**
Group C23C 2/0062 is incomplete pending reclassification of documents from group C23C 2/006.

		<p>Groups C23C 2/006 and C23C 2/0062 should be considered in order to perform a complete search.</p>
M	C23C 2/0064	<ul style="list-style-type: none">• {using masking layers} <p><u>WARNING</u> Group C23C 2/0064 is incomplete pending reclassification of documents from group C23C 2/006. Groups C23C 2/0064 and C23C 2/006 should be considered in order to perform a complete search.</p>
M	C23C 2/02	<ul style="list-style-type: none">• Pretreatment of the material to be coated, e.g. for coating on selected surface areas (C23C 2/30 takes precedence) <p><u>WARNING</u> Group C23C 2/02 is impacted by reclassification into groups C23C 2/022, C23C 2/0222, C23C 2/0224, C23C 2/024, C23C 2/026, C23C 2/0032, C23C 2/004, C23C 2/325 and C23C 2/50 – C23C 2/544. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	C23C 2/022	<ul style="list-style-type: none">• {by heating} <p><u>WARNING</u> Groups C23C 2/022 – C23C 2/0224 are incomplete pending reclassification of documents from group C23C 2/02. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	C23C 2/024	<ul style="list-style-type: none">• {by cleaning or etching} <p><u>WARNING</u> Group C23C 2/024 is incomplete pending reclassification of documents from group C23C 2/02. Groups C23C 2/02 and C23C 2/024 should be considered in order to perform a complete search.</p>
M	C23C 2/026	<ul style="list-style-type: none">• {Deposition of sublayers, e.g. adhesion layers or pre-applied alloying elements or corrosion protection} <p><u>WARNING</u> Group C23C 2/026 is incomplete pending reclassification of documents from group C23C 2/02. Groups C23C 2/02 and C23C 2/026 should be considered in order to perform a complete search.</p>
M	C23C 2/14	<ul style="list-style-type: none">• Removing excess of molten coatings; Controlling or regulating the coating thickness <p><u>WARNING</u> Group C23C 2/14 is impacted by reclassification into groups C23C 2/50 – C23C 2/544. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	C23C 2/26	<ul style="list-style-type: none">• After-treatment (C23C 2/14 takes precedence) <p><u>WARNING</u> Group C23C 2/26 is impacted by reclassification into groups C23C 2/261, C23C 2/325 and C23C 2/50 – C23C 2/544. All groups listed in this Warning should be considered in order to perform a complete search.</p>

- M C23C 2/261
- {in a gas atmosphere, e.g. inert or reducing atmosphere}
- WARNING**
Group C23C 2/261 is incomplete pending reclassification of documents from groups C23C 2/26, C23C 2/265, C23C 2/28 and C23C 2/285. All groups listed in this Warning should be considered in order to perform a complete search.
- M C23C 2/265
- {by applying solid particles to the molten coating}
- WARNING**
Group C23C 2/265 is impacted by reclassification into group C23C 2/261. Groups C23C 2/265 and C23C 2/261 should be considered in order to perform a complete search.
- M C23C 2/28
- Thermal after-treatment, e.g. treatment in oil bath
- WARNING**
Group C23C 2/28 is impacted by reclassification into groups C23C 2/261 and C23C 2/29. Groups C23C 2/28, C23C 2/261 and C23C 2/29 should be considered in order to perform a complete search.
- M C23C 2/285
- {for remelting the coating}
- WARNING**
Group C23C 2/285 is impacted by reclassification into group C23C 2/261. Groups C23C 2/285 and C23C 2/261 should be considered in order to perform a complete search.
- M C23C 2/29
- {Cooling or quenching}
- WARNING**
Group C23C 2/29 is incomplete pending reclassification of documents from group C23C 2/28. Groups C23C 2/28 and C23C 2/29 should be considered in order to perform a complete search.
- M C23C 2/325
- {Processes or devices for cleaning the bath}
- WARNING**
Group C23C 2/325 is incomplete pending reclassification of documents from groups C23C 2/00, C23C 2/003, C23C 2/02 and C23C 2/26. All groups listed in this Warning should be considered in order to perform a complete search.
- M C23C 2/50
- {Controlling or regulating the coating processes ([C23C 2/14](#) takes precedence)}
- WARNING**
Groups C23C 2/50 - C23C 2/544 are incomplete pending reclassification of documents from groups C23C 2/00, C23C 2/003, C23C 2/006, C23C 2/02, C23C 2/14 and C23C 2/26. All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP12028 (D21F)

- U D21F 1/00 **Wet end of machines for making continuous webs of paper**
- M D21F 1/10
- Wire-cloths (~~production of wire-cloths B21F~~)
- M D21F 1/36
- Guiding mechanisms (~~suction rolls D21F 3/10~~)
- U D21F 1/66
- Pulp catching, de-watering, or recovering; Re-use of pulp-water

M D21F 1/68 · · using hydrocyclones ~~(hydrocyclones-B04C)~~

M D21F 2/00 Transferring **continuous** webs from wet ends to press sections ~~((handling webs in general B65H))~~

Project: RP11845 (E05B)

M E05B

LOCKS; ACCESSORIES THEREFOR; HANDCUFFS

NOTES

1. Operating or controlling of locks for vehicle wings are classified in groups [E05B 77/00](#) - [E05B 81/00](#).

2. Knobs, handles or press buttons for locks of vehicle wings are classified in [E05B 79/00](#) - [E05B 85/00](#).

~~3. (In this subclass, it is desirable to add the indexing code(s) of E05Y.)~~

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

E05B 1/02	covered by	E05B 1/00
E05B 5/02	covered by	E05B 5/003
E05B 5/04	covered by	E05B 5/003
E05B 9/06	covered by	E05B 9/00 - E05B 9/048
E05B 13/02	covered by	E05B 11/00 , E05B 15/08 and E05B 17/14
E05B 13/06	covered by	E05B 11/00 , E05B 15/08 and E05B 17/14
E05B 13/08	covered by	E05B 13/00
E05B 15/12	covered by	E05B 17/2007
E05B 17/02	covered by	E05C 7/02
E05B 19/02	covered by	E05B 19/00
E05B 19/06	covered by	E05B 19/00
E05B 19/08	covered by	E05B 19/0017 , E05B 19/14 , E05B 35/003 and E05B 35/14
E05B 19/10	covered by	E05B 19/04
E05B 19/12	covered by	E05B 35/003
E05B 19/16	covered by	E05B 35/007 , E05B 27/0028 and E05B 29/0006
E05B 21/02-	covered by	E05B 21/00
E05B 21/04	covered by	E05B 21/00
E05B 25/00-E05B 25/10	covered by	E05B 21/00 and E05B 23/00
E05B 27/04-E05B 27/06	covered by	E05B 27/0003 - E05B 27/0096
E05B 29/02-E05B 29/14	covered by	E05B 29/0006 - E05B 29/0093
E05B 35/04	covered by	E05B 35/00
E05B 37/06	covered by	E05B 37/04 and E05B 67/00
E05B 37/18	covered by	E05B 37/16 and E05B 67/00
E05B 37/22	covered by	E05B 37/20 and E05B 67/00
E05B 45/14	covered by	E05B 45/06
E05B 47/04	covered by	E05B 47/02
E05B 47/08	covered by	E05B 47/06 and E05B 15/101
E05B 49/02-E05B 49/04	covered by	G07C 9/00

E05B 55/02	covered by	E05B 55/00
E05B 55/04	covered by	E05B 55/00 and E05B 13/00
E05B 55/08	covered by	E05B 55/06
E05B 55/10	covered by	E05B 55/06
E05B 55/14-E05B 55/16	covered by	E05B 55/00
E05B 59/02 - E05B 59/04	covered by	E05B 59/00
E05B 59/06	covered by	E05B 15/102
E05B 65/04	covered by	E05C 7/02
E05B 67/12	covered by	E05B 67/10
E05B 67/16	covered by	E05B 67/14
E05B 67/20	covered by	E05B 67/18
E05B 67/30	covered by	E05B 67/28
E05B 67/34	covered by	E05B 67/32
E05B 71/02	covered by	E05B 71/00 and E05B 37/00

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP11845 (E05C)

M E05C

BOLTS OR FASTENING DEVICES FOR WINGS, SPECIALLY FOR DOORS OR WINDOWS (latching means for sideboard or tailgate structures for vehicles [B62D](#), {[B62D 33/02](#)}; fastening devices for constructional or engineering elements [E04](#), [F16B](#); locks, fastening devices structurally or operatively combined or having significant cooperation with locks [E05B](#); means for operating or controlling wing fasteners in conjunction with mechanisms for moving the wing [E05F](#))

NOTES

1. In this subclass only the movement essential for securing the wing is considered, e.g. a sliding bolt which is rotated on its axis to prevent its withdrawal is classified as having only a sliding movement.

2. Attention is drawn to the definition following the title of class [E05](#).

3. {In this subclass, it is desirable to add the indexing code(s) of [E05Y](#).}

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

E05C 3/32	covered by	E05C 3/30
E05C 17/06	covered by	E05C 17/04
E05C 17/10	covered by	E05C 17/04
E05C 21/02	covered by	E05C 21/00

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP11845 (E05F)

U E05F 15/00

Power-operated mechanisms for wings (motor-operated accessories in locks for completing closing or initiating opening of a wing [E05B 17/00](#))

U E05F 15/60

· using electrical actuators

U E05F 15/603

· · using rotary electromotors

U E05F 15/611

· · · for swinging wings

- M E05F 15/627 operated by flexible elongated pulling elements, e.g. belts, chains or cables (using flexible elongated push-pull mechanisms [E05F 15/619](#))

NOTE

In this group, it is desirable to add the indexing codes of [E05Y 2201/644](#).

Project: RP11845 (E05Y)

- M E05Y **INDEXING SCHEME RELATING TO HINGES OR OTHER SUSPENSION DEVICES FOR DOORS, WINDOWS OR WINGS AND DEVICES FOR MOVING WINGS INTO OPEN OR CLOSED POSITION, CHECKS FOR WINGS AND WING FITTINGS ASSOCIATED WITH SUBCLASSES [E05D](#) AND [E05F](#), RELATING TO CONSTRUCTION ELEMENTS, ELECTRIC CONTROL, POWER SUPPLY, POWER SIGNAL OR TRANSMISSION, USER INTERFACES, MOUNTING OR COUPLING, DETAILS, ACCESSORIES, AUXILIARY OPERATIONS NOT OTHERWISE PROVIDED FOR, CONCERNED WITH THE FUNCTIONING OF THE WING APPLICATION THEREOF**

- M E05Y 2201/00 **Constructional elements; Accessories ~~therefore~~therefor**

- M E05Y 2201/20 . Brakes; Disengaging means, ~~e.g. clutches~~; Holders, ~~e.g. locks~~; Stops; *Valves*; Accessories ~~therefore~~therefor

- U E05Y 2201/218 . . Holders

- C E05Y 2201/22 . . . Locks

WARNING

Group [E05Y 2201/22](#) is impacted by reclassification into group [E05Y 2201/221](#).

Groups [E05Y 2201/22](#) and [E05Y 2201/221](#) should be considered in order to perform a complete search.

- N E05Y 2201/221 Touch latches

WARNING

Group [E05Y 2201/221](#) is incomplete pending reclassification of documents from group [E05Y 2201/22](#).

Groups [E05Y 2201/22](#) and [E05Y 2201/221](#) should be considered in order to perform a complete search.

- U E05Y 2201/23 . . Actuation thereof

- M E05Y 2201/246 . . . by *auxiliary* motors, magnets, springs or weights

- M E05Y 2201/248 . . . ~~characterised by the transmission~~ *Transmissions*

- M E05Y 2201/25 . . ~~Force~~ *Mechanical means for force* or torque adjustment ~~therefore therefor~~ (~~E05Y 2400/21 takes precedence~~)

- M E05Y 2201/252 . . ~~characterised by type~~ *Type* of friction

- M E05Y 2201/262 . . ~~characterised by type of motion~~ *Type of motion, e.g. braking*

- M E05Y 2201/40 . Motors; Magnets; Springs; Weights; Accessories ~~therefore~~therefor

- M E05Y 2201/404 . . ~~characterised by the function~~ *Function thereof*

- M E05Y 2201/406 . . . for ~~additional wing movements only~~ *a secondary movement of the wing*

- M E05Y 2201/47 . . Springs; ~~Spring tensioners~~

- M E05Y 2201/48 . . . Leaf ~~or leg~~ springs

- D E05Y 2201/492 . . . Spring tensioners, tension sensors

<administratively transferred to [E05Y 2201/499](#) ADD>

- U E05Y 2201/496 . . . Double acting springs

N	E05Y 2201/499	• • <i>Spring tensioners; Tension sensors</i>
T	E05Y 2201/60	• Suspension or transmission members; Accessories therefore <i>therefor</i>
D	E05Y 2201/602	• • Suspension members <administratively transferred to E05Y 2201/60 ADD>
M	E05Y 2201/606	• • Accessories therefore <i>therefor</i>
M	E05Y 2201/62	• • • Synchronisation of <i>suspension or</i> transmission members
U	E05Y 2201/622	• • Suspension or transmission members elements
M	E05Y 2201/644	• • • Flexible elongated pulling elements; Members cooperating with flexible elongated pulling elements
M	E05Y 2201/648	• • • • having teeth (toothed gearing E05Y 2201/71)
M	E05Y 2201/658	• • • ▾ Members cooperating with flexible elongated pulling elements
M	E05Y 2201/66	• • • • ▾ Deflectors; Guides
M	E05Y 2201/662	• • • • • ▾ Cable sheaths
M	E05Y 2201/664	• • • • • ▾ Drums
M	E05Y 2201/666	• • • • • ▾ Magazines
M	E05Y 2201/668	• • • • • ▾ Pulleys; Wheels
M	E05Y 2201/67	• • • • • ▾ in tackles
M	E05Y 2201/672	• • • • • ▾ Tensioners, tension sensors
M	E05Y 2201/684	• • • Rails; <i>Tracks</i>
M	E05Y 2201/708	• • • Sliders (E05Y 2201/64 takes precedence)
U	E05Y 2201/71	• • • Toothed gearing
U	E05Y 2201/716	• • • • Pinions
U	E05Y 2201/718	• • • • • Bevelled pinions
M	E05Y 2400/00	Electronic control; <i>Electrical power</i>; Power supply; Power or signal transmission; User interfaces
U	E05Y 2400/10	• Electronic control
U	E05Y 2400/20	• • of brakes, disengaging means, holders or stops
M	E05Y 2400/202	• • • Force or torque control (mechanical aspects E05Y 2201/25)
U	E05Y 2400/30	• • of motors
N	E05Y 2400/3013	• • • <i>during manual wing operation</i>
N	E05Y 2400/3014	• • • • <i>Back driving the transmission or motor</i>
N	E05Y 2400/3015	• • • • <i>Power assistance</i>
N	E05Y 2400/3016	• • • • <i>Overriding existing wing movement</i>
N	E05Y 2400/3017	• • • • <i>Safety means therefor</i>
M	E05Y 2400/302	• • • during electromotoric <i>electric motor</i> braking
N	E05Y 2400/304	• • • <i>Voltage control</i>
N	E05Y 2400/306	• • • <i>Temperature control</i>
M	E05Y 2400/32	• • ▾ Position control, detection or monitoring
M	E05Y 2400/322	• • • ▾ by using absolute position sensors (sensors for electronic control of hinges, wings, windows as such E05Y 2400/44)
M	E05Y 2400/324	• • • • ▾ Switches
M	E05Y 2400/326	• • • • ▾ of the angular type
M	E05Y 2400/328	• • • • ▾ of the linear type
M	E05Y 2400/33	• • • ▾ by using load sensors (sensors for electronic control of hinges, wings, windows as such E05Y 2400/44)

- M E05Y 2400/332 ▾ Switches
- M E05Y 2400/334 . . . ▾ by using pulse generators
- M E05Y 2400/336 ▾ of the angular type
- M E05Y 2400/337 ▾ Encoder wheels
- M E05Y 2400/338 ▾ of the linear type
- M E05Y 2400/34 ▾ Pulse count limit setting
- M E05Y 2400/342 ▾ Pulse count value setting or correcting
- M E05Y 2400/35 . . . ▾ related to specific positions
- M E05Y 2400/354 ▾ End positions
- M E05Y 2400/356 ▾ ~~Predefined intermediate~~*Intermediate* positions
- M E05Y 2400/358 ▾ in the proximity of end positions
- C E05Y 2400/36 . . ▾ Speed control, detection or monitoring

WARNING

Group [E05Y 2400/36](#) is impacted by reclassification into group [E05Y 2400/37](#).

Groups [E05Y 2400/36](#) and [E05Y 2400/37](#) should be considered in order to perform a complete search.

- N E05Y 2400/37 . . . by using acceleration sensors

WARNING

Group [E05Y 2400/37](#) is incomplete pending reclassification of documents from group [E05Y 2400/36](#).

Groups [E05Y 2400/36](#) and [E05Y 2400/37](#) should be considered in order to perform a complete search.

- M E05Y 2400/40 . . ▾ Control units ~~therefore~~*therefor*
- M E05Y 2400/41 . . . ▾ for multiple motors
- M E05Y 2400/415 ▾ for multiple wings
- M E05Y 2400/42 ▾ for multiple openings
- M E05Y 2400/44 . . Sensors ~~therefore-not directly associated with the wing~~*movement*(~~E05Y-2400/322, E05Y-2400/33, E05Y-2400/55, E05Y-2400/56; E05Y-2400/852 take precedence~~)
- U E05Y 2400/445 . . . Switches
- N E05Y 2400/446 . . . Vehicle state sensors, e.g. parked or inclination
- N E05Y 2400/447 . . . Moisture or submergence sensors

WARNING

Group [E05Y 2400/447](#) is incomplete pending reclassification of documents from group [E05Y 2800/428](#).

Groups [E05Y 2800/428](#) and [E05Y 2400/447](#) should be considered in order to perform a complete search.

- N E05Y 2400/449 . . . Pollutant or particulate sensors
- U E05Y 2400/45 . . Control modes
- M E05Y 2400/452 . . . for saving energy, e.g. *sleep or wake-up*
- M E05Y 2400/456 . . . for programming, e.g. *learning or AI [artificial intelligence]*
- U E05Y 2400/50 . . Fault detection

T	E05Y 2400/502	<ul style="list-style-type: none"> • • • of components <p><u>WARNING</u> Group E05Y 2400/502 is incomplete pending reclassification of documents from group E05Y 2800/404. Groups E05Y 2800/404 and E05Y 2400/502 should be considered in order to perform a complete search.</p>
M	E05Y 2400/504	<ul style="list-style-type: none"> • • • of control, <i>of software</i>
M	E05Y 2400/52	<ul style="list-style-type: none"> • • Safety arrangements <i>associated with the wing motor</i> (Safety means for manual wing operation E05Y 2800/116)
U	E05Y 2400/525	<ul style="list-style-type: none"> • • • Car-jacking prevention
N	E05Y 2400/528	<ul style="list-style-type: none"> • • • Overheating or overcooling prevention <p><u>WARNING</u> Group E05Y 2400/528 is incomplete pending reclassification of documents from group E05Y 2800/414. Groups E05Y 2800/414 and E05Y 2400/528 should be considered in order to perform a complete search.</p>
U	E05Y 2400/53	<ul style="list-style-type: none"> • • • Wing impact prevention or reduction
M	E05Y 2400/532	<ul style="list-style-type: none"> • • • • Emergency braking <i>or blocking</i>
T	E05Y 2400/54	<ul style="list-style-type: none"> • • • • Obstruction or resistance detection <p><u>WARNING</u> Group E05Y 2400/54 is incomplete pending reclassification of documents from group E05Y 2800/41. Groups E05Y 2800/41 and E05Y 2400/54 should be considered in order to perform a complete search.</p>
M	E05Y 2400/55	<ul style="list-style-type: none"> • • • • • by using load sensors (sensors for electronic control of hinges, wings, windows as such E05Y 2400/44)
M	E05Y 2400/56	<ul style="list-style-type: none"> • • • • • by using speed sensors (sensors for electronic control of hinges, wings, windows as such E05Y 2400/44)
D	E05Y 2400/59	<ul style="list-style-type: none"> • • • Travel display <p><administratively transferred to E05Y 2400/83 ADD></p>
M	E05Y 2400/60	<ul style="list-style-type: none"> • Power supply; Power or signal transmission <i>Electrical power characteristics, e.g. pulsed or alternating powered and powerless modes</i>
M	E05Y 2400/61	<ul style="list-style-type: none"> • ▾ Power supply
M	E05Y 2400/612	<ul style="list-style-type: none"> • • ▾ Batteries
M	E05Y 2400/614	<ul style="list-style-type: none"> • • • ▾ charging thereof
M	E05Y 2400/616	<ul style="list-style-type: none"> • • ▾ Generators
M	E05Y 2400/628	<ul style="list-style-type: none"> • • ▾ Solar cells
M	E05Y 2400/65	<ul style="list-style-type: none"> • ▾ Power or signal transmission
M	E05Y 2400/652	<ul style="list-style-type: none"> • • ▾ by bus
M	E05Y 2400/654	<ul style="list-style-type: none"> • • ▾ by electrical cables
M	E05Y 2400/656	<ul style="list-style-type: none"> • • ▾ by travelling contacts
M	E05Y 2400/658	<ul style="list-style-type: none"> • • • ▾ with current rails
M	E05Y 2400/66	<ul style="list-style-type: none"> • • ▾ Wireless transmission
M	E05Y 2400/662	<ul style="list-style-type: none"> • • • ▾ by optical waves
M	E05Y 2400/664	<ul style="list-style-type: none"> • • • ▾ by radio waves

C	E05Y 2400/80	<ul style="list-style-type: none"> • User interfaces <p><u>WARNING</u> Group E05Y 2400/80 is impacted by reclassification into groups E05Y 2400/8505, E05Y 2400/851 and E05Y 2400/8515. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	E05Y 2400/81	<ul style="list-style-type: none"> • • User displays Feedback to user, e.g. tactile
M	E05Y 2400/812	<ul style="list-style-type: none"> • • • with acoustic display Acoustic
M	E05Y 2400/814	<ul style="list-style-type: none"> • • • • Sound emitters, e.g. speakers loudspeakers
M	E05Y 2400/816	<ul style="list-style-type: none"> • • • • • Voice emitters
C	E05Y 2400/818	<ul style="list-style-type: none"> • • • with visual display Visual <p><u>WARNING</u> Group E05Y 2400/818 is impacted by reclassification into group E05Y 2600/58. Groups E05Y 2400/818 and E05Y 2600/58 should be considered in order to perform a complete search.</p>
M	E05Y 2400/82	<ul style="list-style-type: none"> • • • • Images, Symbols; Symbols
M	E05Y 2400/822	<ul style="list-style-type: none"> • • • • Light emitters, e.g. LEDs light emitting diodes [LED]
N	E05Y 2400/83	<ul style="list-style-type: none"> • • • Travel information display
C	E05Y 2400/85	<ul style="list-style-type: none"> • • User input means <p><u>WARNING</u> Group E05Y 2400/85 is impacted by reclassification into groups E05Y 2400/8505, E05Y 2400/851 and E05Y 2400/8515. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E05Y 2400/8505	<ul style="list-style-type: none"> • • • User authentication, e.g. biometric <p><u>WARNING</u> Group E05Y 2400/8505 is incomplete pending reclassification of documents from groups E05Y 2400/80, E05Y 2400/85 and E05Y 2800/426. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	E05Y 2400/851	<ul style="list-style-type: none"> • • • Voice <p><u>WARNING</u> Group E05Y 2400/851 is incomplete pending reclassification of documents from groups E05Y 2400/80 and E05Y 2400/85. Groups E05Y 2400/80, E05Y 2400/85 and E05Y 2400/851 should be considered in order to perform a complete search.</p>
N	E05Y 2400/8515	<ul style="list-style-type: none"> • • • Smart phones; Tablets <p><u>WARNING</u> Group E05Y 2400/8515 is incomplete pending reclassification of documents from groups E05Y 2400/80 and E05Y 2400/85. Groups E05Y 2400/80, E05Y 2400/85 and E05Y 2400/8515 should be considered in order to perform a complete search.</p>
M	E05Y 2400/856	<ul style="list-style-type: none"> • • • • Actuation thereof
M	E05Y 2400/858	<ul style="list-style-type: none"> • • • • • by body parts, e.g. by feet
M	E05Y 2400/86	<ul style="list-style-type: none"> • • • • • • by hand

U	E05Y 2600/00	Mounting or coupling arrangements for elements provided for in this subclass
M	E05Y 2600/10	· Adjustable or movable
M	E05Y 2600/13	· · by motors, magnets, springs, or weights
M	E05Y 2600/20	· · characterised by the movement transmission <i>with specific transmission movement</i>
M	E05Y 2600/30	· · characterised by the type of <i>Adjustment</i> motion
U	E05Y 2600/50	· Mounting methods; Positioning
U	E05Y 2600/506	· · Plastic deformation
M	E05Y 2600/508	· · · Riveting (in general B21J)
U	E05Y 2600/52	· · Toolless
M	E05Y 2600/526	· · · Glueing <i>Gluing</i> or cementing
M	E05Y 2600/54	· · Welding (in general B23K, B29C 65/02)
C	E05Y 2600/56	· · Positioning, <i>e.g. re-positioning</i> , or pre-mounting
<p>WARNING Group <i>E05Y 2600/56</i> is impacted by reclassification into group <i>E05Y 2600/58</i>. Groups <i>E05Y 2600/56</i> and <i>E05Y 2600/58</i> should be considered in order to perform a complete search.</p>		
N	E05Y 2600/58	· · · <i>by using indicators or markings, e.g. scales</i>
<p>WARNING Group <i>E05Y 2600/58</i> is incomplete pending reclassification of documents from groups <i>E05Y 2400/818</i> and <i>E05Y 2600/56</i>. Groups <i>E05Y 2400/818</i>, <i>E05Y 2600/56</i> and <i>E05Y 2600/58</i> should be considered in order to perform a complete search.</p>		
M	E05Y 2600/60	· Mounting or coupling members (devices for fastening or securing constructional elements or machine parts together, e.g. nails, bolts, in general F16B); Accessories therefore <i>therefor</i>
M	E05Y 2600/628	· · Profiles; <i>Strips</i>
U	E05Y 2800/00	Details, accessories and auxiliary operations not otherwise provided for
U	E05Y 2800/10	· Additional functions
D	E05Y 2800/11	· · Manual wing operation <administratively transferred to E05Y 2400/3013 ADD>
D	E05Y 2800/112	· · · Back-driving the transmission or motor <administratively transferred to E05Y 2400/3014 ADD>
D	E05Y 2800/113	· · · · Power assistance <administratively transferred to E05Y 2400/3015 ADD>
D	E05Y 2800/114	· · · · Overriding existing wing movement <administratively transferred to E05Y 2400/3016 ADD>
D	E05Y 2800/116	· · · Safety means therefore <administratively transferred to E05Y 2400/3017 ADD>
U	E05Y 2800/122	· · Telescopic action
N	E05Y 2800/13	· · <i>Sequential actions</i>
U	E05Y 2800/15	· Applicability
M	E05Y 2800/16	· · applicable <i>Applicable</i> on combinations of fixed and movable wings

U	E05Y 2800/17	• • Universally applicable
M	E05Y 2800/176	• • • on different wing types, <i>weights or sizes</i>
U	E05Y 2800/20	• Combinations of elements
U	E05Y 2800/23	• • of elements of different categories
M	E05Y 2800/234	• • • of motors and brakes; <i>of motors and locks</i>
T	E05Y 2800/26	• Form; <i>or</i> shape
<p>WARNING <i>Groups E05Y 2800/26, E05Y 2800/30 and E05Y 2800/31 are incomplete pending reclassification of documents from group E05Y 2800/264. All groups listed in this Warning should be considered in order to perform a complete search.</i></p>		
F	E05Y 2800/264 (Frozen)	• • compact
<p>WARNING <i>Group E05Y 2800/264 is no longer used for the classification of documents as of May 1, 2024. The content of this group is being reclassified into groups E05Y 2800/26, E05Y 2800/269, E05Y 2800/30 and E05Y 2800/31. All groups listed in this Warning should be considered in order to perform a complete search.</i></p>		
C	E05Y 2800/268	• • cylindrical; <i>disc-shaped; circular</i>
<p>WARNING <i>Group E05Y 2800/268 is impacted by reclassification into group E05Y 2800/269. Groups E05Y 2800/268 and E05Y 2800/269 should be considered in order to perform a complete search.</i></p>		
N	E05Y 2800/269	• • ball shaped, e.g. spherical
<p>WARNING <i>Group E05Y 2800/269 is incomplete pending reclassification of documents from groups E05Y 2800/264 and E05Y 2800/268. Groups E05Y 2800/264, E05Y 2800/268 and E05Y 2800/269 should be considered in order to perform a complete search.</i></p>		
M	E05Y 2800/27	• • profiles <i>Profiles; Strips</i>
M	E05Y 2800/28	• • tubular, <i>annular</i>
U	E05Y 2800/298	• • having indentations
N	E05Y 2800/30	• • <i>inclined, angled</i>
N	E05Y 2800/31	• • <i>eccentric</i>
M	E05Y 2800/37	• Length, width <i>or depth</i> adjustment
M	E05Y 2800/372	• • Telescopic <i>Telescopically</i>
M	E05Y 2800/40	• Protection <i>Physical or chemical protection</i> (E05Y 2400/50, E05Y 2400/52 take precedence)
C	E05Y 2800/404	• • against component faults or failure
<p>WARNING <i>Group E05Y 2800/404 is impacted by reclassification into group E05Y 2400/502. Groups E05Y 2800/404 and E05Y 2400/502 should be considered in order to perform a complete search.</i></p>		

- C E05Y 2800/41
- against finger injury
- WARNING
Group E05Y 2800/41 is impacted by reclassification into group E05Y 2400/54.
Groups E05Y 2800/41 and E05Y 2400/54 should be considered in order to perform a complete search.
- C E05Y 2800/414
- against high or low temperatures
- WARNING
Group E05Y 2800/414 is impacted by reclassification into group E05Y 2400/528.
Groups E05Y 2800/414 and E05Y 2400/528 should be considered in order to perform a complete search.
- M E05Y 2800/424
- against unintended use, e.g. protection against vandalism or sabotage
- C E05Y 2800/426
- against unauthorised use, e.g. keys (E05Y 2400/51, E05Y 2400/522 take precedence)
- WARNING
Group E05Y 2800/426 is impacted by reclassification into group E05Y 2400/8505.
Groups E05Y 2800/426 and E05Y 2400/8505 should be considered in order to perform a complete search.
- C E05Y 2800/428
- against water or ice
- WARNING
Group E05Y 2800/428 is impacted by reclassification into group E05Y 2400/447.
Groups E05Y 2800/428 and E05Y 2400/447 should be considered in order to perform a complete search.
- U E05Y 2800/45
- Manufacturing
- M E05Y 2800/455
- Extrusion (in general B29C 48/00, B21C 23/00)
- M E05Y 2800/46
- Injection moulding (in general B29C 45/00)
- U E05Y 2800/67
- Materials; Strength alteration thereof
- C E05Y 2800/676
- Plastics
- WARNING
Group E05Y 2800/676 is incomplete pending reclassification of documents from group E05Y 2800/682.
Group E05Y 2800/676 is also impacted by reclassification into group E05Y 2800/683.
Groups E05Y 2800/676, E05Y 2800/682 and E05Y 2800/683 should be considered in order to perform a complete search.
- C E05Y 2800/678
- Elastomers
- WARNING
Group E05Y 2800/678 is incomplete pending reclassification of documents from group E05Y 2800/682.
Group E05Y 2800/678 is also impacted by reclassification into group E05Y 2800/683.
Groups E05Y 2800/678, E05Y 2800/682 and E05Y 2800/683 should be considered in order to perform a complete search.
- M E05Y 2800/68
- Combinations of materials creating distinct article parts

- C E05Y 2800/682
- Strength alteration by reinforcing, e.g. by applying ribs
- WARNING**
 Group [E05Y 2800/682](#) is impacted by reclassification into groups [E05Y 2800/676](#), [E05Y 2800/678](#) and [E05Y 2800/683](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N E05Y 2800/683
- • by fibre reinforcement
- WARNING**
 Group [E05Y 2800/683](#) is incomplete pending reclassification of documents from groups [E05Y 2800/676](#), [E05Y 2800/678](#) and [E05Y 2800/682](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- U E05Y 2800/69
- Permanence of use
- M E05Y 2800/692
- • Temporary use, e.g. *removable tools*
- M E05Y 2800/72
- Sets of mutually exchangeable elements, e.g. *modular*
- M E05Y 2800/73
- *Single-use of elements* *Multiple functions*
- M E05Y 2800/74
- Specific positions (~~E05Y 2400/35 takes precedence~~)
- M E05Y 2800/748
- • end
- U E05Y 2900/00**
- Application of doors, windows, wings or fittings thereof**
- U E05Y 2900/10
- for buildings or parts thereof
- M E05Y 2900/13
- • ~~characterised by the type~~ *Type* of wing
- U E05Y 2900/132
- • • Doors
- M E05Y 2900/136
- • • • *Screens*; Insect doors
- M E05Y 2900/20
- for ~~furnitures~~ *furniture*, e.g. cabinets
- M E05Y 2900/202
- • for display cabinets, e.g. *for refrigerated cabinets*
- M E05Y 2900/204
- • for display counters, e.g. *for refrigerated counters*
- U E05Y 2900/30
- for domestic appliances
- M E05Y 2900/312
- • for washing machines *or laundry dryers*
- U E05Y 2900/50
- for vehicles
- M E05Y 2900/502
- • for aircraft *or spacecraft*
- M E05Y 2900/504
- • for ~~armored~~ *armoured* vehicles
- M E05Y 2900/53
- • ~~characterised by the type~~ *Type* of wing
- M E05Y 2900/534
- • • Fuel lids, *charger lids*
- N E05Y 2900/535
- • • *Hatch covers*, e.g. *for recreational vehicles or armoured vehicles*
- M E05Y 2900/544
- • • Tailboards ~~or sideboards~~, *tailgates or sideboards opening downwards*
- M E05Y 2900/546
- • • ~~Tailgates~~ *Tailboards, tailgates or sideboards opening upwards*
- D E05Y 2900/60
- for other use
- <administratively transferred to [E05Y 2999/00](#) ADD>
- D E05Y 2900/602
- • for containers
- <administratively transferred to [E05Y 2999/00](#) ADD>
- D E05Y 2900/604
- • • for large containers
- <administratively transferred to [E05Y 2999/00](#) ADD>
- D E05Y 2900/606
- • for electronic devices
- <administratively transferred to [E05Y 2999/00](#) ADD>

- D E05Y 2900/608
- for machines
<administratively transferred to [E05Y 2999/00](#) ADD>
- D E05Y 2900/612
- for manhole covers
<administratively transferred to [E05Y 2999/00](#) ADD>
- D E05Y 2900/614
- for toilet seats or covers
<administratively transferred to [E05Y 2999/00](#) ADD>

N E05Y 2999/00 **Subject-matter not otherwise provided for in this subclass**

Project: RP0027-F (E21B)

M E21B 1/00 **Percussion drilling**

NOTE

When classifying in groups [E21B 1/12](#) - [E21B 1/38](#), a symbol from one of the following main groups of [B25D](#) should also be given:

- [B25D 9/00](#) Portable percussive tools with fluid-pressure drives
- [B25D 11/00](#) Portable percussive tools with motor drive
- [B25D 16/00](#) Portable percussive machines with superimposed rotation
- [B25D 17/00](#) Details of, or accessories for, portable power-driven percussive tools

WARNING

Group E21B 1/00 is impacted by reclassification into groups E21B 1/12, E21B 1/14, E21B 1/16, E21B 1/18, E21B 1/20, E21B 1/22, E21B 1/24, E21B 1/26, E21B 1/28, E21B 1/30, E21B 1/32, E21B 1/34, E21B 1/36, and E21B 1/38.

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 1/02
- Surface drives for drop hammers {or percussion drilling}, e.g. with a cable

WARNING

Group E21B 1/02 is incomplete pending reclassification of documents from group E21B 1/12.

Group E21B 1/02 is also impacted by reclassification into groups E21B 1/04, E21B 1/36 and E21B 1/38.

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 1/04
- Devices for reversing the movement of the rod or cable at the surface

WARNING

Group E21B 1/04 is incomplete pending reclassification of documents from groups E21B 1/02 and E21B 1/12.

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 1/12
- with a reciprocating impulse member ([E21B 1/02](#), [E21B 1/38](#) take precedence)

WARNING

Group E21B 1/12 is incomplete pending reclassification of documents from group E21B 1/00.

Group E21B 1/12 is also impacted by reclassification into groups E21B 1/02, E21B 1/04, E21B 1/14, E21B 1/16, E21B 1/18, E21B 1/20, E21B 1/22, E21B 1/24, E21B 1/26, E21B 1/28, E21B 1/30, E21B 1/32, E21B 1/34 and E21B 1/38.

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 1/14
- driven by a rotating mechanism
- WARNING**
Groups E21B 1/14 – E21B 1/20 are incomplete pending reclassification of documents from groups E21B 1/00 and E21B 1/12.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 1/22
- driven by electromagnets
- WARNING**
Group E21B 1/22 is incomplete pending reclassification of documents from groups E21B 1/00 and E21B 1/12.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 1/24
- the impulse member being a piston driven directly by fluid pressure
- WARNING**
Groups E21B 1/24 – E21B 1/34 are incomplete pending reclassification of documents from groups E21B 1/00 and E21B 1/12.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 1/36
- Tool-carrier piston type, i.e. in which the tool is connected to an impulse member
- WARNING**
Group E21B 1/36 is incomplete pending reclassification of documents from groups E21B 1/00, E21B 1/02 and E21B 1/12.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 1/38
- Hammer piston type, i.e. in which the tool bit or anvil is hit by an impulse member
- WARNING**
Group E21B 1/38 is incomplete pending reclassification of documents from groups E21B 1/00, E21B 1/02 and E21B 1/12.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 3/00
- Rotary drilling**
- WARNING**
Group E21B 3/00 is impacted by reclassification into groups E21B 3/02, E21B 3/022, E21B 3/025, E21B 3/03, E21B 3/035, E21B 3/04, E21B 3/045, and E21B 3/06.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 3/02
- Surface drives for rotary drilling
- WARNING**
Group E21B 3/02 is incomplete pending reclassification of documents from group E21B 3/00.
Group E21B 3/02 is also impacted by reclassification into group E21B 3/022.
Groups E21B 3/00, E21B 3/02, and E21B 3/022 should be considered in order to perform a complete search.

- M E21B 3/022
- {Top drives}
- WARNING**
Group E21B 3/022 is incomplete pending reclassification of documents from groups E21B 3/00 and E21B 3/02.
Groups E21B 3/00, E21B 3/02, and E21B 3/022 should be considered in order to perform a complete search.
- M E21B 3/025
- with a to-and-fro rotation of the tool
- WARNING**
Group E21B 3/025 is incomplete pending reclassification of documents from group E21B 3/00.
Groups E21B 3/00 and E21B 3/025 should be considered in order to perform a complete search.
- M E21B 3/03
- with an intermittent unidirectional rotation of the tool
- WARNING**
Group E21B 3/03 is incomplete pending reclassification of documents from group E21B 3/00.
Groups E21B 3/00 and E21B 3/03 should be considered in order to perform a complete search.
- M E21B 3/035
- with slipping or elastic transmission
- WARNING**
Group E21B 3/035 is incomplete pending reclassification of documents from group E21B 3/00.
Groups E21B 3/00 and E21B 3/035 should be considered in order to perform a complete search.
- M E21B 3/04
- Rotary tables
- WARNING**
Groups E21B 3/04 — E21B 3/06 are incomplete pending reclassification of documents from group E21B 3/00.
All groups listed in this Warning should be considered in order to perform a complete search.
- U E21B 7/00**
- Special methods or apparatus for drilling**
- U E21B 7/02
- Drilling rigs characterised by means for land transport {with their own drive}, e.g. skid mounting or wheel mounting
- U E21B 7/027
- {Drills for drilling shallow holes, e.g. for taking soil samples or for drilling postholes}
- M E21B 7/028
- {the drilling apparatus being detachable from the vehicle, e.g. hand portable drills}
- WARNING**
Group E21B 7/028 is incomplete pending reclassification of documents from group E21B 11/005.
Groups E21B 11/005 and E21B 7/028 should be considered in order to perform a complete search.
- M E21B 7/26
- Drilling without earth removal, e.g. with self-propelled burrowing devices ([E21B 7/30](#) takes precedence)
- WARNING**
Group E21B 7/26 is impacted by reclassification into group E21B 7/267.

Groups E21B 7/26 and E21B 7/267 should be considered in order to perform a complete search.

- M E21B 7/265
- {Combined with earth removal}

WARNING

Group E21B 7/265 is impacted by reclassification into group E21B 7/267. Groups E21B 7/265 and E21B 7/267 should be considered in order to perform a complete search.

- M E21B 7/267
- {Drilling devices with senders, e.g. radio-transmitters for position of drilling tool}

WARNING

Group E21B 7/267 is incomplete pending reclassification of documents from groups E21B 7/26 and E21B 7/265. Groups E21B 7/26, E21B 7/265, and E21B 7/267 should be considered in order to perform a complete search.

- U E21B 10/00
- Drill bits (specially adapted for deflecting the direction of boring {E21B 7/064}; with means for collecting substances E21B 27/00)**

- M E21B 10/26
- Drill bits with leading portion, i.e. drill bits with a pilot cutter; Drill bits for enlarging the borehole, e.g. reamers (percussion drill bits with leading portion E21B 10/40)

WARNING

Group E21B 10/26 is impacted by reclassification into group E21B 10/265. Groups E21B 10/26 and E21B 10/265 should be considered in order to perform a complete search.

- M E21B 10/265
- {Bi-center drill bits, i.e. an integral bit and eccentric reamer used to simultaneously drill and underream the hole}

WARNING

Group E21B 10/265 is incomplete pending reclassification of documents from groups E21B 10/26, E21B 10/28, E21B 10/30, E21B 10/32, E21B 10/322, E21B 10/325, E21B 10/327, E21B 10/34, and E21B 10/345. All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 10/28
- with non-expansible roller cutters

WARNING

Group E21B 10/28 is impacted by reclassification into group E21B 10/265. Groups E21B 10/28 and E21B 10/265 should be considered in order to perform a complete search.

- M E21B 10/30
- • Longitudinal axis roller reamers, e.g. reamer stabilisers

WARNING

Group E21B 10/30 is impacted by reclassification into group E21B 10/265. Groups E21B 10/30 and E21B 10/265 should be considered in order to perform a complete search.

- M E21B 10/32
- with expansible cutting tools

WARNING

Group E21B 10/32 is impacted by reclassification into group E21B 10/265. Groups E21B 10/32 and E21B 10/265 should be considered in order to perform a complete search.

- M E21B 10/322
- • • {cutter shifted by fluid pressure ([E21B 10/345](#) takes precedence)}
- WARNING**
Group E21B-10/322 is impacted by reclassification into group E21B-10/265. Groups E21B-10/322 and E21B-10/265 should be considered in order to perform a complete search.
- M E21B 10/325
- • • {the cutter being shifted by a spring mechanism}
- WARNING**
Group E21B-10/325 is impacted by reclassification into group E21B-10/265. Groups E21B-10/325 and E21B-10/265 should be considered in order to perform a complete search.
- M E21B 10/327
- • • {the cutter being pivoted about a longitudinal axis ([E21B 10/34](#) takes precedence)}
- WARNING**
Group E21B-10/327 is impacted by reclassification into group E21B-10/265. Groups E21B-10/327 and E21B-10/265 should be considered in order to perform a complete search.
- M E21B 10/34
- • • of roller-cutter type
- WARNING**
Group E21B-10/34 is impacted by reclassification into group E21B-10/265. Groups E21B-10/34 and E21B-10/265 should be considered in order to perform a complete search.
- M E21B 10/345
- • • • {cutter shifted by fluid pressure}
- WARNING**
Group E21B-10/345 is impacted by reclassification into group E21B-10/265. Groups E21B-10/345 and E21B-10/265 should be considered in order to perform a complete search.
- M E21B 10/42
- Rotary drag type drill bits with teeth, blades or like cutting elements, e.g. fork-type bits, fish tail bits (characterised by wear resisting parts [E21B 10/46](#); by conduits or nozzles for drilling fluid [E21B 10/60](#); by detachable or adjustable parts [E21B 10/62](#))
- WARNING**
Group E21B-10/42 is impacted by reclassification into groups E21B 10/62, E21B 10/627, and E21B 10/633. All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 10/43
- • characterised by the arrangement of teeth or other cutting elements
- WARNING**
Group E21B-10/43 is impacted by reclassification into groups E21B-10/62, E21B-10/627, and E21B-10/633. All groups listed in this Warning should be considered in order to perform a complete search.
- U E21B 10/46
- characterised by wear resisting parts, e.g. diamond inserts
- U E21B 10/56
- • Button-type inserts ([E21B 10/52](#) takes precedence)

- M E21B 10/567
- • • with preformed cutting elements mounted on a distinct support, e.g. polycrystalline inserts
- WARNING
Group E21B-10/567 is impacted by reclassification into group E21B-10/5671.
Groups E21B-10/567 and E21B-10/5671 should be considered in order to perform a complete search.
- M E21B 10/5671
- • • {with chip breaking arrangements}
- WARNING
Group E21B-10/5671 is incomplete pending reclassification of documents from groups E21B-10/567 and E21B-10/5673.
Groups E21B-10/567, E21B-10/5673, and E21B-10/5671 should be considered in order to perform a complete search.
- M E21B 10/5673
- • • {having a non planar or non circular cutting face}
- WARNING
Group E21B-10/5673 is impacted by reclassification into group E21B-10/5671.
Groups E21B-10/5673 and E21B-10/5671 should be considered in order to perform a complete search.
- M E21B 10/62
- characterised by parts, e.g. cutting elements, which are detachable or adjustable ([E21B 10/64](#) takes precedence; for roller bits [E21B 10/20](#); for augers [E21B 10/44](#))
- WARNING
Groups E21B-10/62 – E21B-10/633 are incomplete pending reclassification of documents from groups E21B-10/42 and E21B-10/43.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 11/00**
- Other drilling tools**
- WARNING
Group E21B 11/00 is impacted by reclassification into group E21B-11/04.
Groups E21B-11/00 and E21B-11/04 should be considered in order to perform a complete search.
- M E21B 11/005
- {Hand operated drilling tools}
- WARNING
Group E21B 11/005 is impacted by reclassification into group E21B 7/028.
Groups E21B 11/005 and E21B 7/028 should be considered in order to perform a complete search.
- M E21B 11/04
- Boring grabs
- WARNING
Group E21B-11/04 is incomplete pending reclassification of documents from groups E21B-11/00 and E21B-27/00.
Groups E21B-11/00, E21B-27/00, and E21B-11/04 should be considered in order to perform a complete search.
- U E21B 17/00**
- Drilling rods or pipes; Flexible drill strings; Kellies; Drill collars; Sucker rods;{Cables;} Casings; Tubings**

- M E21B 17/02
- Couplings; joints {(expandable couplings or joints [E21B 43/106](#))}
- WARNING**
Group E21B-17/02 is impacted by reclassification into group E21B-17/041. Groups E21B-17/02 and E21B-17/041 should be considered in order to perform a complete search.
- M E21B 17/028
- {Electrical or electro-magnetic connections}
- WARNING**
Group E21B-17/028 is impacted by reclassification into groups E21B-17/0283 and E21B-17/0285. Groups E21B-17/028, E21B-17/0283, and E21B-17/0285 should be considered in order to perform a complete search.
- M E21B 17/0283
- • {characterised by the coupling being contactless, e.g. inductive}
- WARNING**
Group E21B-17/0283 is incomplete pending reclassification of documents from group E21B-17/028. Groups E21B-17/028 and E21B-17/0283 should be considered in order to perform a complete search.
- M E21B 17/0285
- • {characterised by electrically insulating elements}
- WARNING**
Group E21B-17/0285 is incomplete pending reclassification of documents from group E21B-17/028. Groups E21B-17/028 and E21B-17/0285 should be considered in order to perform a complete search.
- M E21B 17/04
- • between rod {or the like} and bit or between rod and rod {or the like}
- WARNING**
Group E21B-17/04 is impacted by reclassification into group E21B-17/041. Groups E21B-17/04 and E21B-17/041 should be considered in order to perform a complete search.
- M E21B 17/041
- • {specially adapted for coiled tubing}
- WARNING**
Group E21B-17/041 is incomplete pending reclassification of documents from groups E21B-17/02 and E21B-17/04. Groups E21B-17/02, E21B-17/04, and E21B-17/041 should be considered in order to perform a complete search.
- M E21B 17/046
- • with ribs, pins, or jaws, and complementary grooves or the like, e.g. bayonet catches
- WARNING**
Group E21B-17/046 is impacted by reclassification into group E21B-17/0465. Groups E21B-17/046 and E21B-17/0465 should be considered in order to perform a complete search.
- M E21B 17/0465
- • • {characterised by radially inserted locking elements}
- WARNING**
Group E21B-17/0465 is incomplete pending reclassification of documents from group E21B-17/046. Groups E21B-17/046 and E21B-17/0465 should be considered in order to perform a complete search.

- U E21B 17/08 • • Casing joints
- M E21B 17/085 • • • {Riser connections (connectors for wellhead [E21B 33/038](#))}
- WARNING
Group E21B 17/085 is impacted by reclassification into group E21B 17/0853.
Groups E21B 17/085 and E21B 17/0853 should be considered in order to perform a complete search.
- M E21B 17/0853 • • • • {Connections between sections of riser provided with auxiliary lines, e.g. kill and choke lines}
- WARNING
Group E21B 17/0853 is incomplete pending reclassification of documents from group E21B 17/085.
Groups E21B 17/085 and E21B 17/0853 should be considered in order to perform a complete search.
- U E21B 19/00 Handling rods, casings, tubes or the like outside the borehole, e.g. in the derrick; Apparatus for feeding the rods or cables**
- M E21B 19/08 • Apparatus for feeding the rods or cables ([E21B 19/22](#) takes precedence; automatic feed [E21B 44/02](#)); Apparatus for increasing or decreasing the pressure on the drilling tool; Apparatus for counterbalancing the weight of the rods
- WARNING
Group E21B 19/08 is impacted by reclassification into groups E21B 19/081, E21B 19/083, E21B 19/084, E21B 19/086, E21B 19/087, E21B 19/089, and E21B 19/09.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 19/081 • • Screw-and-nut feed mechanisms
- WARNING
Group E21B 19/081 is incomplete pending reclassification of documents from group E21B 19/08.
Groups E21B 19/08 and E21B 19/081 should be considered in order to perform a complete search.
- M E21B 19/083 • • Cam, rack or like feed mechanisms
- WARNING
Group E21B 19/083 is incomplete pending reclassification of documents from group E21B 19/08.
Groups E21B 19/08 and E21B 19/083 should be considered in order to perform a complete search.
- M E21B 19/084 • • with flexible drawing means, e.g. cables
- WARNING
Group E21B 19/084 is incomplete pending reclassification of documents from group E21B 19/08.
Groups E21B 19/08 and E21B 19/084 should be considered in order to perform a complete search.

- M E21B 19/086
- with a fluid-actuated cylinder ([E21B 19/084](#), [E21B 19/087](#), [E21B 19/09](#) take precedence)
- WARNING**
Group E21B 19/086 is incomplete pending reclassification of documents from group E21B 19/08.
Groups E21B 19/08 and E21B 19/086 should be considered in order to perform a complete search.
- M E21B 19/087
- by means of a swinging arm
- WARNING**
Group E21B 19/087 is incomplete pending reclassification of documents from group E21B 19/08.
Groups E21B 19/08 and E21B 19/087 should be considered in order to perform a complete search.
- M E21B 19/089
- with a spring or an additional weight
- WARNING**
Group E21B 19/089 is incomplete pending reclassification of documents from group E21B 19/08.
Groups E21B 19/08 and E21B 19/089 should be considered in order to perform a complete search.
- M E21B 19/09
- specially adapted for drilling underwater formations from a floating support using heave compensators supporting the drill string
- WARNING**
Group E21B 19/09 is incomplete pending reclassification of documents from group E21B 19/08.
Groups E21B 19/08 and E21B 19/09 should be considered in order to perform a complete search.
- M E21B 19/10
- Slips; Spiders {; Catching devices (rotary tables with master bushing or kelly bushing [E21B 3/04](#))}
- WARNING**
Group E21B 19/10 is impacted by reclassification into group E21B 19/102.
Groups E21B 19/10 and E21B 19/102 should be considered in order to perform a complete search.
- M E21B 19/102
- {using rollers or spherical balls as load gripping elements}
- WARNING**
Group E21B 19/102 is incomplete pending reclassification of documents from group E21B 19/10.
Groups E21B 19/10 and E21B 19/102 should be considered in order to perform a complete search.
- M E21B 21/00
- Methods or apparatus for flushing boreholes, e.g. by use of exhaust air from motor (freeing objects stuck in boreholes by flushing [E21B 31/03](#))**
- WARNING**
Group E21B 21/00 is impacted by reclassification into groups E21B 21/001, E21B 21/002, E21B 21/003, E21B 21/01, E21B 21/012, E21B 21/015, E21B 21/019, E21B 21/02, E21B 21/06, E21B 21/062, E21B 21/063, E21B 21/065, E21B 21/066, E21B 21/067, E21B 21/068, E21B 21/07, E21B 21/08, E21B 21/082, E21B 21/085, E21B 21/10, E21B 21/103, E21B 21/106, E21B 21/12, E21B 21/14, E21B 21/16, and E21B 21/18.

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 21/001
 - {specially adapted for underwater drilling (dual gradient drilling [E21B 21/082](#))}
 - WARNING**
Group E21B 21/001 is incomplete pending reclassification of documents from group E21B 21/00.
Group E21B 21/001 is also impacted by reclassification into group E21B 21/082.
Groups E21B 21/00, E21B 21/001, and E21B 21/082 should be considered in order to perform a complete search.

- M E21B 21/002
 - {Down-hole drilling fluid separation systems (containers comprising collecting means with a strainer [E21B 27/005](#); subsoil filtering [E21B 43/02](#); down-hole production separators [E21B 43/38](#))}
 - WARNING**
Group E21B 21/002 is incomplete pending reclassification of documents from group E21B 21/00.
Groups E21B 21/00 and E21B 21/002 should be considered in order to perform a complete search.

- M E21B 21/003
 - {Means for stopping loss of drilling fluid (plastering the borehole wall [E21B 33/138](#))}
 - WARNING**
Group E21B 21/003 is incomplete pending reclassification of documents from group E21B 21/00.
Groups E21B 21/00 and E21B 21/003 should be considered in order to perform a complete search.

- M E21B 21/01
 - Arrangements for handling drilling fluids or cuttings outside the borehole, e.g. mud boxes
 - WARNING**
Group E21B 21/01 is incomplete pending reclassification of documents from group E21B 21/00.
Group E21B 21/01 is also impacted by reclassification into group E21B 21/019.
Groups E21B 21/00, E21B 21/01, and E21B 21/019 should be considered in order to perform a complete search.

- U E21B 21/011
 - {Dust eliminating or dust removing while drilling}
- M E21B 21/012
 - • {using exhaust air from the drilling motor for blowing off the dust at the borehole entrance}
 - WARNING**
Group E21B 21/012 is incomplete pending reclassification of documents from group E21B 21/00.
Groups E21B 21/00 and E21B 21/012 should be considered in order to perform a complete search.

- M E21B 21/015
 - • Means engaging the bore entrance, e.g. hoods for collecting dust
 - WARNING**
Group E21B 21/015 is incomplete pending reclassification of documents from group E21B 21/00.
Group E21B 21/015 is also impacted by reclassification into group E21B 21/019.
Groups E21B 21/00, E21B 21/015, and E21B 21/019 should be considered in order to perform a complete search.

- M E21B 21/019
- {Arrangements for maintaining circulation of drilling fluid while connecting or disconnecting tubular joints}
- WARNING
Group E21B 21/019 is incomplete pending reclassification of documents from groups E21B 21/00, E21B 21/01, and E21B 21/015.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 21/02
- Swivel joints in hose-lines
- WARNING
Group E21B 21/02 is incomplete pending reclassification of documents from group E21B 21/00.
Groups E21B 21/00 and E21B 21/02 should be considered in order to perform a complete search.
- M E21B 21/06
- Arrangements for treating drilling fluids outside the borehole
- WARNING
Groups E21B 21/06 – E21B 21/07 are incomplete pending reclassification of documents from group E21B 21/00.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 21/08
- Controlling or monitoring pressure or flow of drilling fluid, e.g. automatic filling of boreholes, automatic control of bottom pressure (valve arrangements therefor [E21B 21/10](#))
- WARNING
Group E21B 21/08 is incomplete pending reclassification of documents from group E21B 21/00.
Group E21B 21/08 is also impacted by reclassification into groups E21B 21/082 and E21B 21/085.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 21/082
- {Dual gradient systems, i.e. using two hydrostatic gradients or drilling fluid densities}
- WARNING
Group E21B 21/082 is incomplete pending reclassification of documents from groups E21B 21/00, E21B 21/001, and E21B 21/08.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 21/085
- {Underbalanced techniques, i.e. where borehole fluid pressure is below formation pressure}
- WARNING
Group E21B 21/085 is incomplete pending reclassification of documents from groups E21B 21/00 and E21B 21/08.
Groups E21B 21/00, E21B 21/08, and E21B 21/085 should be considered in order to perform a complete search.
- M E21B 21/10
- Valve arrangements in drilling-fluid circulation systems
- WARNING
Groups E21B 21/10 – E21B 21/106 are incomplete pending reclassification of documents from group E21B 21/00.
All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 21/12
- using drilling pipes with plural fluid passages, e.g. closed circulation systems
- WARNING**
Group E21B 21/12 is incomplete pending reclassification of documents from group E21B 21/00.
Groups E21B 21/00 and E21B 21/12 should be considered in order to perform a complete search.
- M E21B 21/14
- using liquids and gases, e.g. foams
- WARNING**
Group E21B 21/14 is incomplete pending reclassification of documents from group E21B 21/00.
Groups E21B 21/00 and E21B 21/14 should be considered in order to perform a complete search.
- M E21B 21/16
- using gaseous fluids ([E21B 21/14](#) takes precedence)
- WARNING**
Group E21B 21/16 is incomplete pending reclassification of documents from group E21B 21/00.
Groups E21B 21/00 and E21B 21/16 should be considered in order to perform a complete search.
- M E21B 21/18
- Preventing exhaust air from the drill motor from blowing-off towards the working face
- WARNING**
Group E21B 21/18 is incomplete pending reclassification of documents from group E21B 21/00.
Groups E21B 21/00 and E21B 21/18 should be considered in order to perform a complete search.
- U E21B 23/00** **Apparatus for displacing, setting, locking, releasing or removing tools, packers or the like in boreholes or wells (setting of casings, screens or liners [E21B 43/10](#))**
- M E21B 23/03
- for setting the tools into, or removing the tools from, laterally offset landing nipples or pockets
- WARNING**
Group E21B 23/03 is impacted by reclassification into group E21B 23/12.
Groups E21B 23/03 and E21B 23/12 should be considered in order to perform a complete search.
- M E21B 23/04
- operated by fluid means, e.g. actuated by explosion ([E21B 23/08](#) takes precedence)
- WARNING**
Group E21B 23/04 is impacted by reclassification into groups E21B 23/0411, E21B 23/04115, E21B 23/0412, E21B 23/0413, E21B 23/0414, E21B 23/0415, E21B 23/0416, E21B 23/0417, E21B 23/0418, E21B 23/0419, E21B 23/042, E21B 23/0421, E21B 23/0422, E21B 23/0423, and E21B 34/142.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 23/0411
- {specially adapted for anchoring tools or the like to the borehole wall or to well tube}
- WARNING**
Group E21B 23/0411 is incomplete pending reclassification of documents from group E21B 23/04.

~~Groups E21B 23/04 and E21B 23/0411 should be considered in order to perform a complete search.~~

- M E21B 23/04115
- • {using radial pistons}

WARNING

~~Group E21B 23/04115 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/04115 should be considered in order to perform a complete search.~~

- M E21B 23/0412
- • {characterised by pressure chambers, e.g. vacuum chambers}

WARNING

~~Group E21B 23/0412 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/0412 should be considered in order to perform a complete search.~~

- M E21B 23/0413
- • {using means for blocking fluid flow, e.g. drop balls or darts (using balls or the like for actuating downhole valves [E21B 34/142](#))}

WARNING

~~Group E21B 23/0413 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/0413 should be considered in order to perform a complete search.~~

- M E21B 23/0414
- • {using explosives}

WARNING

~~Group E21B 23/0414 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/0414 should be considered in order to perform a complete search.~~

- M E21B 23/0415
- • {using particular fluids, e.g. electro-active liquids}

WARNING

~~Group E21B 23/0415 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/0415 should be considered in order to perform a complete search.~~

- M E21B 23/0416
- • {characterised by force amplification arrangements}

WARNING

~~Group E21B 23/0416 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/0416 should be considered in order to perform a complete search.~~

- M E21B 23/0417
- • {Down-hole non-explosive gas generating means, e.g. by chemical reaction}

WARNING

~~Group E21B 23/0417 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/0417 should be considered in order to perform a complete search.~~

- M E21B 23/0418
- {specially adapted for locking the tools in landing nipples or recesses}
- WARNING**
Group E21B 23/0418 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/0418 should be considered in order to perform a complete search.
- M E21B 23/0419
- {using down-hole motor and pump arrangements for generating hydraulic pressure}
- WARNING**
Group E21B 23/0419 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/0419 should be considered in order to perform a complete search.
- M E21B 23/042
- {using a single piston or multiple mechanically interconnected pistons}
- WARNING**
Group E21B 23/042 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/042 should be considered in order to perform a complete search.
- M E21B 23/0421
- {using multiple hydraulically interconnected pistons}
- WARNING**
Group E21B 23/0421 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/0421 should be considered in order to perform a complete search.
- M E21B 23/0422
- {characterised by radial pistons (using radial pistons for anchoring [E21B 23/04115](#))}
- WARNING**
Group E21B 23/0422 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/0422 should be considered in order to perform a complete search.
- M E21B 23/0423
- {using step motors}
- WARNING**
Group E21B 23/0423 is incomplete pending reclassification of documents from group E21B 23/04.
Groups E21B 23/04 and E21B 23/0423 should be considered in order to perform a complete search.
- U E21B 23/08
- Introducing or running tools by fluid pressure, e.g. through-the-flow-line tool systems
- M E21B 23/12
- Tool diverters
- WARNING**
Group E21B 23/12 is incomplete pending reclassification of documents from group E21B 23/03.
Groups E21B 23/03 and E21B 23/12 should be considered in order to perform a complete search.

M	E21B 27/00	<p>Containers for collecting or depositing substances in boreholes or wells, e.g. bailers, {baskets or buckets} for collecting mud or sand; Drill bits with means for collecting substances, e.g. valve drill bits</p> <p><u>WARNING</u> Group E21B 27/00 is impacted by reclassification into groups E21B 11/04 and E21B 31/08. Groups E21B 27/00, E21B 11/04, and E21B 31/08 should be considered in order to perform a complete search.</p>
M	E21B 31/00	<p>Fishing for or freeing objects in boreholes or wells</p> <p><u>WARNING</u> Group E21B 31/00 is impacted by reclassification into group E21B 31/08. Groups E21B 31/00 and E21B 31/08 should be considered in order to perform a complete search.</p>
M	E21B 31/03	<ul style="list-style-type: none"> • Freeing by flushing <p><u>WARNING</u> Group E21B 31/03 is impacted by reclassification into group E21B 31/035. Groups E21B 31/03 and E21B 31/035 should be considered in order to perform a complete search.</p>
M	E21B 31/035	<ul style="list-style-type: none"> • {controlling differential pipe sticking} <p><u>WARNING</u> Group E21B 31/035 is incomplete pending reclassification of documents from group E21B 31/03. Groups E21B 31/03 and E21B 31/035 should be considered in order to perform a complete search.</p>
M	E21B 31/08	<ul style="list-style-type: none"> • using junk baskets or the like <p><u>WARNING</u> Group E21B 31/08 is incomplete pending reclassification of documents from groups E21B 27/00 and E21B 31/00. Groups E21B 27/00, E21B 31/00, and E21B 31/08 should be considered in order to perform a complete search.</p>
M	E21B 33/00	<p>Sealing or packing boreholes or wells</p> <p><u>WARNING</u> Group E21B 33/00 is impacted by reclassification into groups E21B 2200/00, E21B 2200/01, E21B 2200/02, E21B 2200/03, E21B 2200/04, E21B 2200/05, E21B 2200/06, E21B 2200/08, E21B 2200/09, E21B 2200/20, and E21B 2200/22. All groups listed in this Warning should be considered in order to perform a complete search.</p>
U	E21B 33/02	<ul style="list-style-type: none"> • Surface sealing or packing
U	E21B 33/03	<ul style="list-style-type: none"> • • Well heads; Setting-up thereof
M	E21B 33/035	<ul style="list-style-type: none"> • • • specially adapted for underwater installations (E21B 33/043, E21B 33/064, E21B 33/076 take precedence) <p><u>WARNING</u> Group E21B 33/035 is impacted by reclassification into groups E21B 33/0353 and E21B 33/0387. Groups E21B 33/035, E21B 33/0353, and E21B 33/0387 should be considered in order to perform a complete search.</p>

- M E21B 33/0353 . . . {Horizontal or spool trees, i.e. without production valves in the vertical main bore}
- WARNING
Group E21B 33/0353 is incomplete pending reclassification of documents from groups E21B 33/035, E21B 33/0355, E21B 33/037, E21B 33/0375, E21B 33/038, E21B 33/0385, and E21B 33/0422.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 33/0355 . . . {Control systems, e.g. hydraulic, pneumatic, electric, acoustic, for submerged well heads}
- WARNING
Group E21B 33/0355 is impacted by reclassification into group E21B 33/0353.
Groups E21B 33/0355 and E21B 33/0353 should be considered in order to perform a complete search.
- M E21B 33/037 . . . Protective housings therefor
- WARNING
Group E21B 33/037 is impacted by reclassification into group E21B 33/0353.
Groups E21B 33/037 and E21B 33/0353 should be considered in order to perform a complete search.
- M E21B 33/0375 . . . {Corrosion protection means}
- WARNING
Group E21B 33/0375 is impacted by reclassification into group E21B 33/0353.
Groups E21B 33/0375 and E21B 33/0353 should be considered in order to perform a complete search.
- M E21B 33/038 . . . Connectors used on well heads, e.g. for connecting blow-out preventer and riser
- WARNING
Group E21B 33/038 is impacted by reclassification into group E21B 33/0353.
Groups E21B 33/038 and E21B 33/0353 should be considered in order to perform a complete search.
- M E21B 33/0385 . . . {electrical connectors}
- WARNING
Group E21B 33/0385 is impacted by reclassification into group E21B 33/0353.
Groups E21B 33/0385 and E21B 33/0353 should be considered in order to perform a complete search.
- M E21B 33/0387 . . . {Hydraulic stab connectors}
- WARNING
Group E21B 33/0387 is incomplete pending reclassification of documents from group E21B 33/035.
Groups E21B 33/035 and E21B 33/0387 should be considered in order to perform a complete search.
- U E21B 33/04 . . . Casing heads; Suspending casings or tubings in well heads

- M E21B 33/0422
- • • {a suspended tubing or casing being gripped by a slip or an internally serrated member}
- WARNING
Group E21B 33/0422 is impacted by reclassification into group E21B 33/0353.
Groups E21B 33/0422 and E21B 33/0353 should be considered in order to perform a complete search.
- U E21B 33/10
- in the borehole {(sealing the junction between main bore and laterals [E21B 41/0042](#))}
- U E21B 33/13
- • Methods or devices for cementing, for plugging holes, crevices or the like
- U E21B 33/14
- • • for cementing casings into boreholes
- M E21B 33/16
- • • using plugs for isolating cement charge; Plugs therefor {(stage cementing [E21B 33/146](#); spacer compositions [C09K 8/424](#))}
- WARNING
Group E21B 33/16 is impacted by reclassification into groups E21B 33/165 and E21B 33/167.
Groups E21B 33/16, E21B 33/165, and E21B 33/167 should be considered in order to perform a complete search.
- M E21B 33/165
- • • • {Cementing plugs specially adapted for being released down-hole (cementing heads [E21B 33/05](#))}
- WARNING
Group E21B 33/165 is incomplete pending reclassification of documents from group E21B 33/16.
Groups E21B 33/16 and E21B 33/165 should be considered in order to perform a complete search.
- M E21B 33/167
- • • • {Cementing plugs provided with anti-rotation mechanisms, e.g. for easier drill-out}
- WARNING
Group E21B 33/167 is incomplete pending reclassification of documents from group E21B 33/16.
Groups E21B 33/16 and E21B 33/167 should be considered in order to perform a complete search.
- U E21B 34/00**
- Valve arrangements for boreholes or wells**
- M E21B 34/02
- in well heads
- WARNING
Group E21B 34/02 is impacted by reclassification into group E21B 34/025.
Groups E21B 34/02 and E21B 34/025 should be considered in order to perform a complete search.
- M E21B 34/025
- {Chokes or valves in wellheads and sub-sea wellheads for variably regulating fluid flow}
- WARNING
Group E21B 34/025 is incomplete pending reclassification of documents from groups E21B 34/02, E21B 34/04, and E21B 34/045.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 34/04
- in underwater well heads
- WARNING
Group E21B 34/04 is impacted by reclassification into group E21B 34/025.

Groups E21B 34/04 and E21B 34/025 should be considered in order to perform a complete search.

- M E21B 34/045
- • {adapted to be lowered on a tubular string into position within a blow-out preventer stack, e.g. so-called test trees}

WARNING

Group E21B 34/045 is impacted by reclassification into group E21B 34/025. Groups E21B 34/045 and E21B 34/025 should be considered in order to perform a complete search.

- U E21B 34/06
- in wells

- M E21B 34/14
- • operated by movement of tools, e.g. sleeve valves operated by pistons or wire line tools {(E21B 34/066 takes precedence)}

WARNING

Group E21B 34/14 is impacted by reclassification into group E21B 34/142. Groups E21B 34/14 and E21B 34/142 should be considered in order to perform a complete search.

- M E21B 34/142
- • {unsupported or free-falling elements, e.g. balls, plugs, darts or pistons}

WARNING

Group E21B 34/142 is incomplete pending reclassification of documents from groups E21B 23/04 and E21B 34/14. Groups E21B 23/04, E21B 34/14, and E21B 34/142 should be considered in order to perform a complete search.

- M E21B 40/00
- Tubing catchers, automatically arresting the fall of oil-well tubing**
{{preventing small objects from falling into the borehole E21B 41/0021}}

WARNING

Group E21B 40/00 is impacted by reclassification into group E21B 40/001. Groups E21B 40/00 and E21B 40/001 should be considered in order to perform a complete search.

- M E21B 40/001
- {in the borehole (anchoring tools in the borehole E21B 23/01)}

WARNING

Group E21B 40/001 is incomplete pending reclassification of documents from group E21B 40/00. Groups E21B 40/00 and E21B 40/001 should be considered in order to perform a complete search.

- M E21B 41/00
- Equipment or details not covered by groups E21B 15/00 - E21B 40/00**

WARNING

Group E21B 41/00 is incomplete pending reclassification of documents from group E21B 41/0092. Group E21B 41/00 is also impacted by reclassification into group E21B 41/0099. Groups E21B 41/0092, E21B 41/00, and E21B 41/0099 should be considered in order to perform a complete search.

- D E21B 41/0092
—(Frozen)
- {Methods relating to program engineering, design or optimisation}

WARNING

Group E21B 41/0092 is no longer used for the classification of documents as of May 1, 2020. The content of this group is being reclassified into groups E21B 41/00, E21B 43/00, E21B 43/16, and G06Q 10/06.

E21B 41/0092

(Frozen)

(continued)

All groups listed in this Warning should be considered in order to perform a complete search.

M E21B 41/0099

- {specially adapted for drilling for or production of natural hydrate or clathrate gas reservoirs; Drilling through or monitoring of formations containing gas hydrates or clathrates}

WARNING

Group E21B 41/0099 is incomplete pending reclassification of documents from group E21B 41/00. Groups E21B 41/00 and E21B 41/0099 should be considered in order to perform a complete search.

M E21B 43/00

Methods or apparatus for obtaining oil, gas, water, soluble or meltable materials or a slurry of minerals from wells (applicable only to water [E03B](#))

WARNING

Group E21B 43/00 is incomplete pending reclassification of documents from group E21B 41/0092. Groups E21B 41/0092 and E21B 43/00 should be considered in order to perform a complete search.

U E21B 43/01

- specially adapted for obtaining from underwater installations

M E21B 43/017

- • Production satellite stations, i.e. underwater installations comprising a plurality of satellite well heads connected to a central station

WARNING

Group E21B 43/017 is impacted by reclassification into group E21B 43/0175. Groups E21B 43/017 and E21B 43/0175 should be considered in order to perform a complete search.

M E21B 43/0175

- • • {Hydraulic schemes for production manifolds}

WARNING

Group E21B 43/0175 is incomplete pending reclassification of documents from group E21B 43/017. Groups E21B 43/017 and E21B 43/0175 should be considered in order to perform a complete search.

U E21B 43/11

- Perforators; Permeators

M E21B 43/119

- • Details, e.g. for locating perforating place or direction

WARNING

Group E21B 43/119 is impacted by reclassification into group E21B 43/1193. Groups E21B 43/119 and E21B 43/1193 should be considered in order to perform a complete search.

M E21B 43/1193

- • • {Dropping perforation guns after gun actuation}

WARNING

Group E21B 43/1193 is incomplete pending reclassification of documents from group E21B 43/119. Groups E21B 43/119 and E21B 43/1193 should be considered in order to perform a complete search.

U E21B 43/12

- Methods or apparatus for controlling the flow of the obtained fluid to or in wells ([E21B 43/25](#) takes precedence; valve arrangements [E21B 34/00](#))

M E21B 43/121

- • {Lifting well fluids (monitoring of down-hole pump systems [E21B 47/008](#))}

WARNING

Group E21B 43/121 is impacted by reclassification into group E21B 43/13.

Groups E21B 43/121 and E21B 43/13 should be considered in order to perform a complete search.

M E21B 43/122

- • • {Gas lift}

WARNING

Group E21B 43/122 is impacted by reclassification into group E21B 43/13. Groups E21B 43/122 and E21B 43/13 should be considered in order to perform a complete search.

M E21B 43/123

- • • • {Gas lift valves}

WARNING

Group E21B 43/123 is impacted by reclassification into groups E21B 43/1235 and E21B 43/13. Groups E21B 43/123, E21B 43/1235, and E21B 43/13 should be considered in order to perform a complete search.

M E21B 43/1235

- • • • {characterised by electromagnetic actuation}

WARNING

Group E21B 43/1235 is incomplete pending reclassification of documents from group E21B 43/123. Groups E21B 43/123 and E21B 43/1235 should be considered in order to perform a complete search.

M E21B 43/124

- • • {Adaptation of jet-pump systems}

WARNING

Group E21B 43/124 is impacted by reclassification into group E21B 43/13. Groups E21B 43/124 and E21B 43/13 should be considered in order to perform a complete search.

M E21B 43/126

- • • {Adaptations of down-hole pump systems powered by drives outside the borehole, e.g. by a rotary or oscillating drive (powered by fluid [E21B 43/129](#))}

WARNING

Group E21B 43/126 is impacted by reclassification into group E21B 43/13. Groups E21B 43/126 and E21B 43/13 should be considered in order to perform a complete search.

M E21B 43/127

- • • • {Adaptations of walking-beam pump systems}

WARNING

Group E21B 43/127 is impacted by reclassification into group E21B 43/13. Groups E21B 43/127 and E21B 43/13 should be considered in order to perform a complete search.

M E21B 43/128

- • • {Adaptation of pump systems with down-hole electric drives}

WARNING

Group E21B 43/128 is impacted by reclassification into group E21B 43/13. Groups E21B 43/128 and E21B 43/13 should be considered in order to perform a complete search.

M E21B 43/129

- • • {Adaptations of down-hole pump systems powered by fluid supplied from outside the borehole (gas-lift [E21B 43/122](#); jet pumps [E21B 43/124](#))}

WARNING

Group E21B 43/129 is impacted by reclassification into group E21B 43/13.

Groups E21B 43/129 and E21B 43/13 should be considered in order to perform a complete search.

- M E21B 43/13
- • {specially adapted to dewatering of wells of gas producing reservoirs, e.g. methane producing coal beds}

WARNING

Group E21B 43/13 is incomplete pending reclassification of documents from groups E21B 43/121, E21B 43/122, E21B 43/123, E21B 43/124, E21B 43/126, E21B 43/127, E21B 43/128, and E21B 43/129.

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 43/16
- Enhanced recovery methods for obtaining hydrocarbons

WARNING

Group E21B 43/16 is incomplete pending reclassification of documents from group E21B 41/0092.

Groups E21B 41/0092 and E21B 43/16 should be considered in order to perform a complete search.

- U E21B 43/25
- Methods for stimulating production {(by vibrating earth formations [E21B 43/003](#))}

- M E21B 43/26
- • by forming crevices or fractures

WARNING

Group E21B 43/26 is impacted by reclassification into groups E21B 43/2605, E21B 43/2607, and E21B 43/27.

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 43/2605
- • • {using gas or liquefied gas}

WARNING

Group E21B 43/2605 is incomplete pending reclassification of documents from group E21B 43/26.

Groups E21B 43/26 and E21B 43/2605 should be considered in order to perform a complete search.

- M E21B 43/2607
- • • {Surface equipment specially adapted for fracturing operations}

WARNING

Group E21B 43/2607 is incomplete pending reclassification of documents from group E21B 43/26.

Groups E21B 43/26 and E21B 43/2607 should be considered in order to perform a complete search.

- M E21B 43/27
- • • by use of eroding chemicals, e.g. acids

WARNING

Group E21B 43/27 is incomplete pending reclassification of documents from group E21B 43/26.

Groups E21B 43/26 and E21B 43/27 should be considered in order to perform a complete search.

- M E21B 43/34
- Arrangements for separating materials produced by the well

WARNING

Group E21B 43/34 is impacted by reclassification into group E21B 43/35.

Groups E21B 43/34 and E21B 43/35 should be considered in order to perform a complete search.

- M E21B 43/35
- {specially adapted for separating solids (down-hole drilling fluid separation systems [E21B 21/002](#); separating solids from drilling fluids [E21B 21/065](#))}
- WARNING**
Group E21B-43/35 is incomplete pending reclassification of documents from groups E21B-43/34, E21B-43/36, E21B-43/38, E21B-43/385, and E21B-43/40.
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 43/36
- Underwater separating arrangements ([E21B 43/38](#) takes precedence)
- WARNING**
Group E21B-43/36 is impacted by reclassification into group E21B-43/35. Groups E21B-43/36 and E21B-43/35 should be considered in order to perform a complete search.
- M E21B 43/38
- in the well
- WARNING**
Group E21B-43/38 is impacted by reclassification into group E21B-43/35. Groups E21B-43/38 and E21B-43/35 should be considered in order to perform a complete search.
- M E21B 43/385
- {by reinjecting the separated materials into an earth formation in the same well}
- WARNING**
Group E21B-43/385 is impacted by reclassification into group E21B-43/35. Groups E21B-43/385 and E21B-43/35 should be considered in order to perform a complete search.
- M E21B 43/40
- Separation associated with re-injection of separated materials {([E21B 43/385](#) takes precedence)}
- WARNING**
Group E21B-43/40 is impacted by reclassification into group E21B-43/35. Groups E21B-43/40 and E21B-43/35 should be considered in order to perform a complete search.
- M E21B 47/00
- Survey of boreholes or wells (monitoring pressure or flow of drilling fluid [E21B 21/08](#))**
- WARNING**
Group E21B-47/00 is impacted by reclassification into group E21B-47/006. Groups E21B-47/00 and E21B-47/006 should be considered in order to perform a complete search.
- M E21B 47/002
- by visual inspection
- WARNING**
Group E21B-47/002 is impacted by reclassification into group E21B-47/0025. Groups E21B-47/002 and E21B-47/0025 should be considered in order to perform a complete search.
- M E21B 47/0025
- {generating an image of the borehole wall using down-hole measurements, e.g. acoustic or electric}
- WARNING**
Group E21B-47/0025 is incomplete pending reclassification of documents from group E21B-47/002.

Groups E21B 47/002 and E21B 47/0025 should be considered in order to perform a complete search.

M E21B 47/006

- {Detection of corrosion or deposition of substances}

WARNING

Group E21B 47/006 is incomplete pending reclassification of documents from group E21B 47/00.
Groups E21B 47/00 and E21B 47/006 should be considered in order to perform a complete search.

M E21B 47/01

- Devices for supporting measuring instruments on drill bits, pipes, rods or wirelines; Protecting measuring instruments in boreholes against heat, shock, pressure or the like

NOTE

Devices for both supporting and protecting measuring instruments are only classified in [E21B 47/017](#)

WARNING

Group E21B 47/01 is impacted by reclassification into group E21B 47/013.
Groups E21B 47/01 and E21B 47/013 should be considered in order to perform a complete search.

M E21B 47/013

- • Devices specially adapted for supporting measuring instruments on drill bits

WARNING

Group E21B 47/013 is incomplete pending reclassification of documents from groups E21B 47/01 and E21B 47/017.
Groups E21B 47/01, E21B 47/017, and E21B 47/013 should be considered in order to perform a complete search.

M E21B 47/017

- • Protecting measuring instruments

WARNING

Group E21B 47/017 is impacted by reclassification into groups E21B 47/013 and E21B 47/0175.
Groups E21B 47/017, E21B 47/013, and E21B 47/0175 should be considered in order to perform a complete search.

M E21B 47/0175

- • • {Cooling arrangements}

WARNING

Group E21B 47/0175 is incomplete pending reclassification of documents from group E21B 47/017.
Groups E21B 47/017 and E21B 47/0175 should be considered in order to perform a complete search.

M E21B 47/10

- Locating fluid leaks, intrusions or movements

WARNING

Group E21B 47/10 is impacted by reclassification into groups E21B 47/113 and E21B 47/114.
Groups E21B 47/10, E21B 47/113, and E21B 47/114 should be considered in order to perform a complete search.

M E21B 47/11

- • using tracers; using radioactivity

WARNING

Group E21B 47/11 is impacted by reclassification into group E21B 47/111.
Groups E21B 47/11 and E21B 47/111 should be considered in order to perform a complete search.

- M E21B 47/111
- • • {using radioactivity}
- WARNING
Group E21B-47/111 is incomplete pending reclassification of documents from group E21B-47/11.
Groups E21B-47/11 and E21B-47/111 should be considered in order to perform a complete search.
- M E21B 47/113
- • using electrical indications; using light radiations
- WARNING
Group E21B-47/113 is incomplete pending reclassification of documents from group E21B-47/10.
Group E21B-47/113 is also impacted by reclassification into group E21B-47/114.
Groups E21B-47/10, E21B-47/113, and E21B-47/114 should be considered in order to perform a complete search.
- M E21B 47/114
- • • {using light radiation}
- WARNING
Group E21B-47/114 is incomplete pending reclassification of documents from groups E21B-47/10 and E21B-47/113.
Groups E21B-47/10, E21B-47/113, and E21B-47/114 should be considered in order to perform a complete search.
- M E21B 47/12
- Means for transmitting measuring-signals or control signals from the well to the surface, or from the surface to the well, e.g. for logging while drilling
- WARNING
Group E21B-47/12 is impacted by reclassification into group E21B-47/138.
Groups E21B-47/12 and E21B-47/138 should be considered in order to perform a complete search.
- M E21B 47/138
- • {Devices entrained in the flow of well-bore fluid for transmitting data, control or actuation signals}
- WARNING
Group E21B-47/138 is incomplete pending reclassification of documents from group E21B-47/12.
Groups E21B-47/12 and E21B-47/138 should be considered in order to perform a complete search.
- U E21B 49/00**
- Testing the nature of borehole walls; Formation testing; Methods or apparatus for obtaining samples of soil or well fluids, specially adapted to earth drilling or wells**
- U E21B 49/08
- Obtaining fluid samples or testing fluids, in boreholes or wells
- M E21B 49/081
- • {with down-hole means for trapping a fluid sample ([E21B 49/10](#) takes precedence)}
- WARNING
Group E21B-49/081 is impacted by reclassification into groups E21B-49/0813 and E21B-49/0815.
Groups E21B-49/081, E21B-49/0813, and E21B-49/0815 should be considered in order to perform a complete search.
- M E21B 49/0813
- • • {Sampling valve actuated by annulus pressure changes}
- WARNING
Group E21B-49/0813 is incomplete pending reclassification of documents from groups E21B-49/081 and E21B-49/083.

~~Groups E21B 49/081, E21B 49/083, and E21B 49/0813 should be considered in order to perform a complete search.~~

M E21B 49/0815

- • • {Sampling valve actuated by tubing pressure changes}

WARNING

~~Group E21B 49/0815 is incomplete pending reclassification of documents from groups E21B 49/081 and E21B 49/083.
Groups E21B 49/081, E21B 49/083, and E21B 49/0815 should be considered in order to perform a complete search.~~

M E21B 49/083

- • • {Samplers adapted to be lowered into or retrieved from a landing nipple, e.g. for testing a well without removing the drill string}

WARNING

~~Group E21B 49/083 is impacted by reclassification into groups E21B 49/0813 and E21B 49/0815.
Groups E21B 49/083, E21B 49/0813, and E21B 49/0815 should be considered in order to perform a complete search.~~

M E21B 49/087

- • {Well testing, e.g. testing for reservoir productivity or formation parameters}

WARNING

~~Group E21B 49/087 is impacted by reclassification into group E21B 49/0875.
Groups E21B 49/087 and E21B 49/0875 should be considered in order to perform a complete search.~~

M E21B 49/0875

- • • {determining specific fluid parameters}

WARNING

~~Group E21B 49/0875 is incomplete pending reclassification of documents from group E21B 49/087.
Groups E21B 49/087 and E21B 49/0875 should be considered in order to perform a complete search.~~

M E21B 2200/00

Special features related to earth drilling for obtaining oil, gas or water

WARNING

~~Group E21B 2200/00 is incomplete pending reclassification of documents from group E21B 33/00.
Groups E21B 33/00 and E21B 2200/00 should be considered in order to perform a complete search.~~

M E21B 2200/01

- Sealings characterised by their shape

WARNING

~~Group E21B 2200/01 is incomplete pending reclassification of documents from group E21B 33/00.
Groups E21B 33/00 and E21B 2200/01 should be considered in order to perform a complete search.~~

M E21B 2200/02

- Down-hole chokes or valves for variably regulating fluid flow

WARNING

~~Group E21B 2200/02 is incomplete pending reclassification of documents from group E21B 33/00.
Groups E21B 33/00 and E21B 2200/02 should be considered in order to perform a complete search.~~

- M E21B 2200/03
- Valves operated by gear mechanisms, e.g. rack and pinion mechanisms
- WARNING
Group E21B 2200/03 is incomplete pending reclassification of documents from group E21B 33/00.
Groups E21B 33/00 and E21B 2200/03 should be considered in order to perform a complete search.
- M E21B 2200/04
- Ball valves
- WARNING
Group E21B 2200/04 is incomplete pending reclassification of documents from group E21B 33/00.
Groups E21B 33/00 and E21B 2200/04 should be considered in order to perform a complete search.
- M E21B 2200/05
- Flapper valves
- WARNING
Group E21B 2200/05 is incomplete pending reclassification of documents from group E21B 33/00.
Groups E21B 33/00 and E21B 2200/05 should be considered in order to perform a complete search.
- M E21B 2200/06
- Sleeve valves
- WARNING
Group E21B 2200/06 is incomplete pending reclassification of documents from group E21B 33/00.
Groups E21B 33/00 and E21B 2200/06 should be considered in order to perform a complete search.
- M E21B 2200/08
- Down-hole devices using materials which decompose under well-bore conditions
- WARNING
Group E21B 2200/08 is incomplete pending reclassification of documents from group E21B 33/00.
Groups E21B 33/00 and E21B 2200/08 should be considered in order to perform a complete search.
- M E21B 2200/09
- Detecting, eliminating, preventing liquid slugs in production pipes
- WARNING
Group E21B 2200/09 is incomplete pending reclassification of documents from group E21B 33/00.
Groups E21B 33/00 and E21B 2200/09 should be considered in order to perform a complete search.
- M E21B 2200/20
- Computer models or simulations, e.g. for reservoirs under production, drill bits
- WARNING
Group E21B 2200/20 is incomplete pending reclassification of documents from group E21B 33/00.
Groups E21B 33/00 and E21B 2200/20 should be considered in order to perform a complete search.
- M E21B 2200/22
- Fuzzy logic, artificial intelligence, neural networks or the like
- WARNING
Group E21B 2200/22 is incomplete pending reclassification of documents from group E21B 33/00.

Groups E21B 33/00 and E21B 2200/22 should be considered in order to perform a complete search.

Project: RP10450 (F02B)

M F02B

INTERNAL-COMBUSTION PISTON ENGINES; COMBUSTION ENGINES IN GENERAL (gas-turbine plants [F02C](#); hot-gas or combustion-product positive-displacement engine plants [F02G](#))

NOTES

1. In this subclass, the following terms or expressions are used with the meanings indicated:
 - "positive ignition" means ignition by a source external to the working fluid, e.g. by spark or incandescent source;
 - "charging" means forcing air or fuel-air mixture into engine cylinders, and thus includes supercharging;
 - "scavenging" means forcing the combustion residues from the cylinders other than by movement of the working pistons, and thus includes tuned exhaust systems.
2. Attention is drawn to the Notes preceding class [F01](#), especially as regards Note (1).
3. Engines with specified cycles or number of cylinders are classified in group [F02B 75/02](#) or [F02B 75/16](#), unless other classifying features predominate.

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

U F02B 31/00

Modifying induction systems for imparting a rotation to the charge in the cylinder (air intakes or induction systems for internal-combustion engines [F02M 35/10](#))

D F02B 2031/003

- ~~{with an auxiliary intake conduit starting upstream of personally controlled throttle valve and ending upstream of and close to the intake valve, or with an auxiliary intake conduit being an independent passage, e.g. having its own carburettor}~~

<administratively transferred to [F02B 31/08](#) INV>

**F F02B 2031/006
(Frozen)**

- {having multiple air intake valves}

WARNING

Group [F02B 2031/006](#) is no longer used for the classification of documents as of May 1, 2024.

The content of this group is being reclassified into groups [F02B 31/085](#) and [F02B 31/087](#).

Groups [F02B 2031/006](#), [F02B 31/085](#) and [F02B 31/087](#) should be considered in order to perform a complete search.

C F02B 31/02

- in engines having inlet valves arranged eccentrically to cylinder axis ([F02B 31/08](#) takes precedence)

WARNING

Group [F02B 31/02](#) is impacted by reclassification into groups [F02B 31/042](#), [F02B 31/08](#), [F02B 31/085](#) and [F02B 31/087](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C F02B 31/04

- by means within the induction channel, e.g. deflectors

WARNING

Group [F02B 31/04](#) is impacted by reclassification into group [F02B 31/042](#).

Groups F02B 31/04 and F02B 31/042 should be considered in order to perform a complete search.

- N F02B 31/042
- {induction channel having a helical shape around the intake valve axis}
- WARNING
*Group F02B 31/042 is incomplete pending reclassification of documents from groups F02B 31/02, F02B 31/04 and F02B 31/082.
All groups listed in this Warning should be considered in order to perform a complete search.*
- U F02B 31/06
- Movable means, e.g. butterfly valves
- T F02B 31/08
- ~~→~~ having multiple air inlets ~~{, i.e. having main and auxiliary intake passages}~~
- WARNING
*Group F02B 31/08 is incomplete pending reclassification of documents from groups F02B 31/02 and F02B 31/082.
Groups F02B 31/02, F02B 31/082 and F02B 31/08 should be considered in order to perform a complete search.*
- F F02B 31/082
(Frozen)
- ~~→~~ {the main passage having a helical shape around the intake valve axis; Engines characterised by provision of driven charging or scavenging pumps (introducing fuel into cylinders by air-pressure F02B 13/00; after-charging F02B 29/06; arrangements of such pumps or other auxiliary apparatus on engines F02B 67/00; combined engine pump control, control dependent on variables other than those generic to pump F02D)}
- WARNING
*Group F02B 31/082 is no longer used for the classification of documents as of May 1, 2024.
The content of this group is being reclassified into groups F02B 31/08 and F02B 31/042.
Groups F02B 31/082, F02B 31/08 and F02B 31/042 should be considered in order to perform a complete search.*
- T F02B 31/085
- ~~→~~ {having two inlet valves}
- WARNING
*Group F02B 31/085 is incomplete pending reclassification of documents from groups F02B 2031/006 and F02B 31/02.
Groups F02B 2031/006, F02B 31/02 and F02B 31/085 should be considered in order to perform a complete search.*
- T F02B 31/087
- ~~→~~ {having three or more inlet valves}
- WARNING
*Group F02B 31/087 is incomplete pending reclassification of documents from groups F02B 2031/006 and F02B 31/02.
Groups F02B 2031/006, F02B 31/02 and F02B 31/087 should be considered in order to perform a complete search.*
- U F02B 61/00
- Adaptations of engines for driving vehicles or for driving propellers; Combinations of engines with gearing (the engine torque being divided by a differential gear for driving a scavenging or charging pump and the engine output shaft F02B 39/06; adaptations or combinations of rotary-piston or oscillating-piston engines F02B 53/14)**
- U F02B 61/04
- for driving propellers
- M F02B 61/045
- {for ~~outboard~~ marine engines}
- U F02B 77/00
- Component parts, details or accessories, not otherwise provided for**

- M F02B 77/04 · Cleaning of, preventing corrosion or erosion in, or preventing unwanted deposits in, combustion engines ~~{{cleaning of fuel injection apparatus F02M 65/00}}~~
- M F02B 77/08 · Safety, indicating, or supervising devices (thermal insulation [F02B 77/11](#); ~~{{rendering engines inoperative or idling F02D 17/04; dependent on lubricating conditions F01M 1/22; dependent on cooling F01P 11/14}}~~; *monitoring or diagnostic devices for exhaust-gas treatment apparatus F01N 11/00*)
- M F02B 77/081 · · ~~{{relating to endless members (endless members, e.g. belts, for driving auxiliary apparatus F02B 67/04)}}~~
- M F02B 2730/00** **Internal-combustion engines with pistons rotating or oscillating with relation to the housing**

Project: MP11967 (F15D)

- M F15D** **FLUID DYNAMICS, i.e. METHODS OR MEANS FOR INFLUENCING THE FLOW OF GASES OR LIQUIDS**

NOTE

This subclass ~~comprises~~ *covers* boundary-layer control and other arrangements and methods, not provided for in other classes, for influencing the flow of fluids relative to constraining surfaces and after leaving these surfaces, e.g. producing or removing turbulence, deflecting jets, guiding flow through bends in conduits, affecting distribution of fluid in a conduit, reducing fluid friction.

WARNING

~~In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.~~

- U F15D 1/00** **Influencing flow of fluids**
- M F15D 1/0015 · {Whirl chambers, *e.g. vortex valves*}
- M F15D 1/002 · {by influencing the boundary layer ~~{{F15D 1/06 and F15D 1/12 take precedence}}~~}
- U F15D 1/02 · in pipes or conduits
- M F15D 1/06 · · by influencing the boundary layer ~~{{use of materials, e.g. to reduce surface friction C09K 3/00}}~~
- U F15D 1/10 · around bodies of solid material
- M F15D 1/12 · · by influencing the boundary layer ~~{{use of materials, e.g. to reduce surface friction C09K 3/00}}~~

Project: RP11961 (F21S)

- U F21S 41/00** **Illuminating devices specially adapted for vehicle exteriors, e.g. headlamps (reversing lights [F21S 43/00](#))**
- U F21S 41/20 · characterised by refractors, transparent cover plates, light guides or filters
- F F21S 41/28 (Frozen) · · {Cover glass}

WARNING

Group F21S 41/28 is no longer used for the classification of documents as of May 1, 2024. The content of this group is being reclassified into groups [F21S 41/2805](#) and [F21S 43/2651](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N F21S 41/2805
- • {Cover glass}
- WARNING
Group [F21S 41/2805](#) is incomplete pending reclassification of documents from group [F21S 41/28](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21S 41/285
- • {Refractors, transparent cover plates, light guides or filters not provided in groups [F21S 41/24](#) -~~[F21S 41/28](#)~~ [F21S 41/2805](#)}
- C F21S 43/00
- Signalling devices specially adapted for vehicle exteriors, e.g. brake lamps, direction indicator lights or reversing lights**
- WARNING
Group [F21S 43/00](#) is impacted by reclassification into group [F21S 43/601](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- U F21S 43/10
- characterised by the light source
- C F21S 43/19
- • Attachment of light sources or lamp holders
- WARNING
Group [F21S 43/19](#) is impacted by reclassification into group [F21S 43/601](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C F21S 43/195
- • • {Details of lamp holders, terminals or connectors}
- WARNING
Group [F21S 43/195](#) is impacted by reclassification into group [F21S 43/601](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C F21S 43/20
- characterised by refractors, transparent cover plates, light guides or filters
- WARNING
Group [F21S 43/20](#) is impacted by reclassification into groups [F21S 43/281](#), [F21S 43/2811](#), [F21S 43/28131](#), [F21S 43/28133](#), [F21S 43/28135](#), [F21S 43/2815](#), [F21S 43/2817](#) and [F21S 43/601](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C F21S 43/235
- • Light guides
- WARNING
Group [F21S 43/235](#) is impacted by reclassification into groups [F21S 43/246](#), [F21S 43/2492](#), [F21S 43/252](#), [F21S 43/253](#), [F21S 43/281](#), [F21S 43/2811](#), [F21S 43/28131](#), [F21S 43/28133](#), [F21S 43/28135](#), [F21S 43/2815](#) and [F21S 43/2817](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C F21S 43/236
- • • characterised by the shape of the light guide
- WARNING
Group [F21S 43/236](#) is impacted by reclassification into groups [F21S 43/252](#), [F21S 43/253](#), [F21S 43/281](#), [F21S 43/2811](#), [F21S 43/28131](#), [F21S 43/28133](#), [F21S 43/28135](#), [F21S 43/2815](#) and [F21S 43/2817](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- C F21S 43/237 rod-shaped
- WARNING**
*Group F21S 43/237 is impacted by reclassification into groups F21S 43/252, F21S 43/253, F21S 43/281, F21S 43/2811, F21S 43/28131, F21S 43/28133, F21S 43/28135, F21S 43/2815 and F21S 43/2817.
All groups listed in this Warning should be considered in order to perform a complete search.*
- C F21S 43/239 plate-shaped
- WARNING**
*Group F21S 43/239 is impacted by reclassification into groups F21S 43/252, F21S 43/253, F21S 43/281, F21S 43/2811, F21S 43/28131, F21S 43/28133, F21S 43/28135, F21S 43/2815 and F21S 43/2817.
All groups listed in this Warning should be considered in order to perform a complete search.*
- C F21S 43/241 of complex shape
- WARNING**
*Group F21S 43/241 is impacted by reclassification into groups F21S 43/252, F21S 43/253, F21S 43/281, F21S 43/2811, F21S 43/28131, F21S 43/28133, F21S 43/28135, F21S 43/2815 and F21S 43/2817.
All groups listed in this Warning should be considered in order to perform a complete search.*
- C F21S 43/242 characterised by the emission area
- WARNING**
*Group F21S 43/242 is impacted by reclassification into groups F21S 43/246, F21S 43/252, F21S 43/253, F21S 43/281, F21S 43/2811, F21S 43/28131, F21S 43/28133, F21S 43/28135, F21S 43/2815 and F21S 43/2817.
All groups listed in this Warning should be considered in order to perform a complete search.*
- C F21S 43/243 emitting light from one or more of its extremities
- WARNING**
*Group F21S 43/243 is impacted by reclassification into groups F21S 43/246, F21S 43/252, F21S 43/253, F21S 43/281, F21S 43/2811, F21S 43/28131, F21S 43/28133, F21S 43/28135, F21S 43/2815 and F21S 43/2817.
All groups listed in this Warning should be considered in order to perform a complete search.*
- C F21S 43/245 emitting light from one or more of its major surfaces
- WARNING**
*Group F21S 43/245 is impacted by reclassification into groups F21S 43/246, F21S 43/252, F21S 43/253, F21S 43/281, F21S 43/2811, F21S 43/28131, F21S 43/28133, F21S 43/28135, F21S 43/2815 and F21S 43/2817.
All groups listed in this Warning should be considered in order to perform a complete search.*

- N F21S 43/246 . . . {having two or more output branches}
- WARNING
Group [F21S 43/246](#) is incomplete pending reclassification of documents from groups [F21S 43/235](#), [F21S 43/242](#), [F21S 43/243](#) and [F21S 43/245](#). All groups listed in this Warning should be considered in order to perform a complete search.
- C F21S 43/247 . . . with a single light source being coupled into the light guide
- WARNING
Group [F21S 43/247](#) is impacted by reclassification into groups [F21S 43/252](#), [F21S 43/253](#), [F21S 43/281](#), [F21S 43/2811](#), [F21S 43/28131](#), [F21S 43/28133](#), [F21S 43/28135](#), [F21S 43/2815](#) and [F21S 43/2817](#). All groups listed in this Warning should be considered in order to perform a complete search.
- C F21S 43/249 . . . with two or more light sources being coupled into the light guide
- WARNING
Group [F21S 43/249](#) is impacted by reclassification into groups [F21S 43/2492](#), [F21S 43/252](#), [F21S 43/253](#), [F21S 43/281](#), [F21S 43/2811](#), [F21S 43/28131](#), [F21S 43/28133](#), [F21S 43/28135](#), [F21S 43/2815](#) and [F21S 43/2817](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/2492 . . . {having two or more input branches}
- WARNING
Group [F21S 43/2492](#) is incomplete pending reclassification of documents from groups [F21S 43/235](#) and [F21S 43/249](#). All groups listed in this Warning should be considered in order to perform a complete search.
- C F21S 43/251 . . . the light guides being used to transmit light from remote light sources
- WARNING
Group [F21S 43/251](#) is impacted by reclassification into groups [F21S 43/252](#), [F21S 43/253](#), [F21S 43/281](#), [F21S 43/2811](#), [F21S 43/28131](#), [F21S 43/28133](#), [F21S 43/28135](#), [F21S 43/2815](#) and [F21S 43/2817](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/252 . . . {Two or more successive light guides}
- WARNING
Group [F21S 43/252](#) is incomplete pending reclassification of documents from groups [F21S 43/235](#), [F21S 43/236](#), [F21S 43/237](#), [F21S 43/239](#), [F21S 43/241](#), [F21S 43/242](#), [F21S 43/243](#), [F21S 43/245](#), [F21S 43/247](#), [F21S 43/249](#) and [F21S 43/251](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/253 . . . {Two or more juxtaposed light guides}
- WARNING
Group [F21S 43/253](#) is incomplete pending reclassification of documents from groups [F21S 43/235](#), [F21S 43/236](#), [F21S 43/237](#), [F21S 43/239](#), [F21S 43/241](#), [F21S 43/242](#), [F21S 43/243](#), [F21S 43/245](#), [F21S 43/247](#), [F21S 43/249](#) and [F21S 43/251](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- C F21S 43/255
 - • {Filters}
 - WARNING
Group [F21S 43/255](#) is impacted by reclassification into groups [F21S 43/601](#), [F21S 43/281](#), [F21S 43/28133](#), [F21S 43/2811](#), [F21S 43/28135](#), [F21S 43/2815](#), [F21S 43/28131](#) and [F21S 43/2817](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- F F21S 43/26 (Frozen)
 - • {Refractors, transparent cover plates, light guides or filters not provided in groups [F21S 43/235](#) - [F21S 43/255](#)}
 - WARNING
Group [F21S 43/26](#) is no longer used for the classification of documents as of May 1, 2024. The content of this group is being reclassified into groups [F21S 43/26221](#), [F21S 43/2605](#), [F21S 43/28133](#), [F21S 43/26211](#), [F21S 43/26261](#), [F21S 43/2641](#), [F21S 43/2651](#), [F21S 43/281](#), [F21S 43/26231](#), [F21S 43/2643](#), [F21S 43/601](#), [F21S 43/26411](#), [F21S 43/2815](#), [F21S 43/2621](#), [F21S 43/26241](#), [F21S 43/265](#), [F21S 43/26251](#), [F21S 43/26271](#), [F21S 43/28135](#), [F21S 43/2817](#), [F21S 43/2811](#), [F21S 43/26421](#) and [F21S 43/28131](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N F21S 43/2605
 - • {Refractors}
 - WARNING
Group [F21S 43/2605](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N F21S 43/2621
 - • • {characterised by the properties of the light beam shaping surface}
 - WARNING
Group [F21S 43/2621](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N F21S 43/26211
 - • • • {redirecting, i.e. substantially only changing light propagation direction}
 - WARNING
Group [F21S 43/26211](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N F21S 43/26221
 - • • • {dividing, unifying or reunifying}
 - WARNING
Group [F21S 43/26221](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N F21S 43/26231 . . . {collimating, focusing, condensing or projecting beams, e.g. projection lenses or Fresnel lenses}
- WARNING
Group [F21S 43/26231](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/26241 . . . {diffusing, scattering or spreading}
- WARNING
Group [F21S 43/26241](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/26251 . . . {Holograms}
- WARNING
Group [F21S 43/26251](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/26261 . . . {Single refractor combining two or more properties of the groups [F21S 43/26211](#) - [F21S 43/26251](#) on opposite sides}
- WARNING
Group [F21S 43/26261](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/26271 . . . {using micro-optics, e.g. micro-lenses or micro-structures}
- WARNING
Group [F21S 43/26271](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/2641 . . . {Refractors or refracting portions characterised by their relative arrangement, e.g. parallel refractors}
- WARNING
Group [F21S 43/2641](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/26411 . . . {Two or more successive refractors}
- WARNING
Group [F21S 43/26411](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N F21S 43/26421 . . . {Refractors comprising a plurality of non-successive refracting portions}
- WARNING
Group [F21S 43/26421](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/2643 . . . {with several light entry surfaces for two or more light sources having distinct functions, at least one of them being signalling}
- WARNING
Group [F21S 43/2643](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/265 . . {Transparent cover plates, e.g. for protecting the interior of the signalling devices against environmental influences}
- WARNING
Group [F21S 43/265](#) is incomplete pending reclassification of documents from group [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/2651 . . . {with several light entry surfaces for two or more light sources having distinct functions, at least one of them being signalling}
- WARNING
Group [F21S 43/2651](#) is incomplete pending reclassification of documents from groups [F21S 41/28](#) and [F21S 43/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C F21S 43/27 . . Attachment thereof
- WARNING
Group [F21S 43/27](#) is impacted by reclassification into groups [F21S 43/2815](#), [F21S 43/28131](#), [F21S 43/2811](#), [F21S 43/601](#), [F21S 43/2817](#), [F21S 43/281](#), [F21S 43/28133](#) and [F21S 43/28135](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/281 . . {Materials thereof; Structures thereof; Properties thereof; Coatings thereof}
- WARNING
Group [F21S 43/281](#) is incomplete pending reclassification of documents from groups [F21S 43/20](#), [F21S 43/235](#), [F21S 43/236](#), [F21S 43/237](#), [F21S 43/239](#), [F21S 43/241](#), [F21S 43/242](#), [F21S 43/243](#), [F21S 43/245](#), [F21S 43/247](#), [F21S 43/249](#), [F21S 43/251](#), [F21S 43/255](#), [F21S 43/26](#) and [F21S 43/27](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/2811 . . . {Heterogeneous materials}
- WARNING
Group [F21S 43/2811](#) is incomplete pending reclassification of documents from groups [F21S 43/20](#), [F21S 43/235](#), [F21S 43/236](#), [F21S 43/237](#), [F21S 43/239](#), [F21S 43/241](#), [F21S 43/242](#), [F21S 43/243](#), [F21S 43/245](#), [F21S 43/247](#), [F21S 43/249](#), [F21S 43/251](#), [F21S 43/255](#), [F21S 43/26](#) and [F21S 43/27](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N F21S 43/28131
- • {Structures comprising multiple layers}
- WARNING**
Group [F21S 43/28131](#) is incomplete pending reclassification of documents from groups [F21S 43/20](#), [F21S 43/235](#), [F21S 43/236](#), [F21S 43/237](#), [F21S 43/239](#), [F21S 43/241](#), [F21S 43/242](#), [F21S 43/243](#), [F21S 43/245](#), [F21S 43/247](#), [F21S 43/249](#), [F21S 43/251](#), [F21S 43/255](#), [F21S 43/26](#) and [F21S 43/27](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/28133
- • {Structures comprising gas or liquid media}
- WARNING**
Group [F21S 43/28133](#) is incomplete pending reclassification of documents from groups [F21S 43/20](#), [F21S 43/235](#), [F21S 43/236](#), [F21S 43/237](#), [F21S 43/239](#), [F21S 43/241](#), [F21S 43/242](#), [F21S 43/243](#), [F21S 43/245](#), [F21S 43/247](#), [F21S 43/249](#), [F21S 43/251](#), [F21S 43/255](#), [F21S 43/26](#) and [F21S 43/27](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/28135
- • {Structures encapsulating the light source}
- WARNING**
Group [F21S 43/28135](#) is incomplete pending reclassification of documents from groups [F21S 43/20](#), [F21S 43/235](#), [F21S 43/236](#), [F21S 43/237](#), [F21S 43/239](#), [F21S 43/241](#), [F21S 43/242](#), [F21S 43/243](#), [F21S 43/245](#), [F21S 43/247](#), [F21S 43/249](#), [F21S 43/251](#), [F21S 43/255](#), [F21S 43/26](#) and [F21S 43/27](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/2815
- • {Mechanical properties, e.g. flexibility}
- WARNING**
Group [F21S 43/2815](#) is incomplete pending reclassification of documents from groups [F21S 43/20](#), [F21S 43/235](#), [F21S 43/236](#), [F21S 43/237](#), [F21S 43/239](#), [F21S 43/241](#), [F21S 43/242](#), [F21S 43/243](#), [F21S 43/245](#), [F21S 43/247](#), [F21S 43/249](#), [F21S 43/251](#), [F21S 43/255](#), [F21S 43/26](#) and [F21S 43/27](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/2817
- • {Coatings, e.g. anti-reflection coatings}
- WARNING**
Group [F21S 43/2817](#) is incomplete pending reclassification of documents from groups [F21S 43/20](#), [F21S 43/235](#), [F21S 43/236](#), [F21S 43/237](#), [F21S 43/239](#), [F21S 43/241](#), [F21S 43/242](#), [F21S 43/243](#), [F21S 43/245](#), [F21S 43/247](#), [F21S 43/249](#), [F21S 43/251](#), [F21S 43/255](#), [F21S 43/26](#) and [F21S 43/27](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C F21S 43/30
- characterised by reflectors
- WARNING**
Group [F21S 43/30](#) is impacted by reclassification into group [F21S 43/601](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C F21S 43/31

- • Optical layout thereof

WARNING

Group [F21S 43/31](#) is impacted by reclassification into groups [F21S 43/331](#), [F21S 43/601](#) and [F21S 43/332](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C F21S 43/315

- • • {using total internal reflection}

WARNING

Group [F21S 43/315](#) is impacted by reclassification into group [F21S 43/402](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C F21S 43/33

- • characterised by their material, surface treatment or coatings

WARNING

Group [F21S 43/33](#) is impacted by reclassification into groups [F21S 43/332](#) and [F21S 43/331](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N F21S 43/331

- • • {Semi-transparent reflectors}

WARNING

Group [F21S 43/331](#) is incomplete pending reclassification of documents from groups [F21S 43/31](#) and [F21S 43/33](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N F21S 43/332

- • • {Diffusing reflectors}

WARNING

Group [F21S 43/332](#) is incomplete pending reclassification of documents from groups [F21S 43/31](#) and [F21S 43/33](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C F21S 43/37

- • Attachment thereof

WARNING

Group [F21S 43/37](#) is impacted by reclassification into group [F21S 43/601](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C F21S 43/40

- characterised by the combination of reflectors and refractors

WARNING

Group [F21S 43/40](#) is impacted by reclassification into groups [F21S 43/402](#) and [F21S 43/401](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N F21S 43/401

- • {the refractors and the reflectors being distinct parts}

WARNING

Group [F21S 43/401](#) is incomplete pending reclassification of documents from group [F21S 43/40](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N F21S 43/402
- {Total internal reflection [TIR] collimators}
- WARNING
Group [F21S 43/402](#) is incomplete pending reclassification of documents from groups [F21S 43/315](#) and [F21S 43/40](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- U F21S 43/50
- characterised by aesthetic components not otherwise provided for, e.g. decorative trim, partition walls or covers
- C F21S 43/51
- {Attachment thereof}
- WARNING
Group [F21S 43/51](#) is impacted by reclassification into group [F21S 43/601](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 43/601
- {characterised by variable optical properties, e.g. involving the use of LCD or movable parts}
- WARNING
Group [F21S 43/601](#) is incomplete pending reclassification of documents from groups [F21S 43/00](#), [F21S 43/19](#), [F21S 43/195](#), [F21S 43/20](#), [F21S 43/255](#), [F21S 43/26](#), [F21S 43/27](#), [F21S 43/30](#), [F21S 43/31](#), [F21S 43/37](#) and [F21S 43/51](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N F21S 2243/00 -
F21S 2243/00
- Indexing code associated with [F21S 43/00](#) relating to manufacturing details of signalling devices specially adapted for vehicle exteriors**
- N F21S 2243/00
- Manufacturing details of signalling devices specially adapted for vehicle exteriors**

Project: RP10479 (G01N)

- U G01N 33/00
- Investigating or analysing materials by specific methods not covered by groups [G01N 1/00](#) - [G01N 31/00](#)**
- NOTE
In groups [G01N 33/52](#) - [G01N 33/98](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.
{This Note corresponds to IPC Note (1) relating to [G01N 33/52](#) - [G01N 33/98](#).}
- U G01N 33/0001
- {by organoleptic means}
- D G01N 2033/0003
- {~~Composite materials~~}
- <administratively transferred to [G01N 33/0003](#) INV>
- N G01N 33/0003
- {~~Composite materials~~}
- M G01N 33/0004
- {Gaseous mixtures, e.g. polluted air (~~gaseous biological material G01N 33/497; exhaust gas of internal combustion engines G01M 15/102~~)}
- M G01N 33/0009
- {General constructional details of gas analysers, e.g. portable test equipment (~~G01N 1/22 takes precedence~~ *devices for withdrawing samples in the gaseous state G01N 1/22*)}
- M G01N 33/0011
- • {Sample conditioning (~~in general G01N 1/28~~ *preparing specimens for investigation G01N 1/28*)}

- M G01N 33/0013 {by a chemical reaction (~~G01N 33/0024 takes precedence~~ a chemical reaction taking place or a gas being eliminated in one or more analysing channels G01N 33/0024)}
- M G01N 33/0014 {by eliminating a gas (~~G01N 33/0013 and G01N 33/0024 take precedence~~ by a chemical reaction G01N 33/0013; a chemical reaction taking place or a gas being eliminated in one or more analysing channels G01N 33/0024)}
- M G01N 33/0016 {by regulating a physical variable, e.g. pressure; ~~or~~ temperature}
- U G01N 33/0018 {by diluting a gas}
- D G01N 2033/0019 {by ~~preconcentration~~
<administratively transferred to [G01N 33/0019](#) INV>
- N G01N 33/0019 {by preconcentration}
- M G01N 33/0026 {~~use of using~~ an alternating circulation of another gas (~~calibrating gas analysers G01N 33/0006~~)}
- U G01N 33/0027 {concerning the detector}
- M G01N 33/0029 {~~cleaning~~ Cleaning of the detector}
- M G01N 33/0031 {comprising two or more sensors, e.g. a sensor array (~~electrochemical electrode arrays G01N 27/27~~)}
- M G01N 33/0036 {~~Specially specially~~ adapted to detect a particular component (~~all the other sub-groups of G01N 33/0004 take precedence~~ physical analysis of gaseous biological material G01N 33/497)}
- M G01N 33/0037 {for ~~NO_x~~NO_x}
- M G01N 33/0039 {for ~~O₃~~O₃}
- M G01N 33/004 {for ~~CO, CO or~~ CO₂}
- M G01N 33/0042 {for ~~SO₂, or~~ SO₃}
- M G01N 33/0044 {for ~~Sulphides, e.g. H₂S, sulfides~~}
- M G01N 33/0045 {for ~~Hg~~Hg}
- M G01N 33/0047 {for ~~organic~~Organic compounds}
- M G01N 33/0049 {for ~~halogenated~~Halogenated organic compounds}
- M G01N 33/005 {for ~~H₂~~H₂}
- M G01N 33/0052 {for ~~gaseous~~Gaseous halogens}
- M G01N 33/0054 {for ~~ammonia~~Ammonia}
- M G01N 33/0055 {for ~~radionuclides~~Radionuclides}
- M G01N 33/0057 {for ~~warfare~~Warfare agents or explosives (~~properties of explosives G01N 33/227~~)}
- M G01N 33/0059 {~~avoiding~~Avoiding interference of a gas with the gas to be measured}
- M G01N 33/006 {~~avoiding~~Avoiding interference of water vapour with the gas to be measured}
- M G01N 33/0062 {concerning the measuring method; ~~e.g. intermittent;~~ or the display, e.g. ~~digital~~intermittent measurement or digital display}
- M G01N 33/0063 {using a threshold to release an alarm or displaying means (~~alarm arrangements G08B, e.g. fire alarm actuated by the presence of smoke or gases G08B 17/10, for other abnormal conditions G08B 21/00~~)}
- U G01N 33/0067 {by measuring the rate of variation of the concentration}
- D G01N 2033/0068 {using a computer specifically programmed}
<administratively transferred to [G01N 33/0068](#) INV>
- N G01N 33/0068 {using a computer specifically programmed}

- M G01N 33/007 . . . {Arrangements to check the analyser (~~calibrating G01N 33/0006~~ *calibrating gas analysers G01N 33/0006*)}
- D G01N 2033/0072 {~~by generating a test gas~~
<administratively transferred to [G01N 33/0072](#) INV>
- N G01N 33/0072 {*by generating a test gas*}
- U G01N 33/0073 . . . {Control unit therefor}
- M G01N 33/0075 {for multiple spatially distributed sensors, e.g. for environmental monitoring (~~transmission systems for measured values G08C~~)}
- D G01N 2033/0077 . {~~testing material properties on individual granules or tablets~~
<administratively transferred to [G01N 33/0077](#) INV>
- N G01N 33/0077 . {*Testing material properties on individual granules or tablets*}
- D G01N 2033/0078 . {~~testing material properties on manufactured objects~~
<administratively transferred to [G01N 33/0078](#) INV>
- N G01N 33/0078 . {*Testing material properties on manufactured objects*}
- D G01N 2033/008 . . {~~sport articles (balls, skis, rackets)~~
<administratively transferred to [G01N 33/008](#) INV>
- N G01N 33/008 . . {*Sport articles, e.g. balls, skis or rackets*}
- D G01N 2033/0081 . . {~~containers; packages; bottles~~
<administratively transferred to [G01N 33/0081](#) INV>
- N G01N 33/0081 . . {*Containers; Packages; Bottles*}
- D G01N 2033/0083 . . {~~vehicle parts~~
<administratively transferred to [G01N 33/0083](#) INV>
- N G01N 33/0083 . . {*Vehicle parts*}
- D G01N 2033/0085 . . . {~~wheels~~
<administratively transferred to [G01N 33/0085](#) INV>
- N G01N 33/0085 . . . {*Wheels*}
- D G01N 2033/0086 . . {~~clothes; hosiery~~
<administratively transferred to [G01N 33/0086](#) INV>
- N G01N 33/0086 . . {*Clothes; Hosiery*}
- D G01N 2033/0088 . . {~~other articles~~
<administratively transferred to [G01N 33/0078](#) INV>
- N G01N 33/009 . . {*Seals*}
- D G01N 2033/009 . . . {~~seals~~
<administratively transferred to [G01N 33/009](#) INV>
- D G01N 2033/0091 . {~~Powders~~
<administratively transferred to [G01N 33/0091](#) INV>
- N G01N 33/0091 . {*Powders*}
- D G01N 2033/0093 . {~~radioactive materials~~
<administratively transferred to [G01N 33/0093](#) INV>
- N G01N 33/0093 . {*Radioactive materials*}
- D G01N 2033/0095 . {~~Semiconductive materials~~
<administratively transferred to [G01N 33/0095](#) INV>
- N G01N 33/0095 . {*Semiconductive materials*}

- D G01N 2033/0096 · {~~testing material properties on thin layers or coatings~~
<administratively transferred to [G01N 33/0096](#) INV>
- N G01N 33/0096 · {~~Testing material properties on thin layers or coatings~~}
- U G01N 33/02 · Food
- U G01N 33/10 · · Starch-containing substances, e.g. dough
- D G01N 2033/105 · · · {~~Pasta~~}
<administratively transferred to [G01N 33/105](#) INV>
- N G01N 33/105 · · · {~~Pasta~~}
- M G01N 33/12 · · Meat; ~~fish~~ *Fish*
- M G01N 33/15 · Medicinal preparations {; Physical properties thereof, e.g. dissolubility (~~drug screening with animal cells G01N 33/5008~~)}
- U G01N 33/18 · Water
- M G01N 33/1806 · · {~~biological~~ *Biological oxygen demand [BOD]* or chemical oxygen demand (~~BOD or COD~~) [*COD*]}
- M G01N 33/1813 · · {~~specific~~ *Specific* cations in water, e.g. heavy metals (~~electrochemical analysis G01N 27/26; detection of ions by colorimetry G01N 31/22~~)}
- M G01N 33/182 · · {~~specific~~ *Specific* anions in water (~~electrochemical analysis G01N 27/26; detection of ions by colorimetry G01N 31/22~~)}
- M G01N 33/1826 · · {~~organic~~ *Organic* contamination in water}
- M G01N 33/1833 · · · {~~Oil in water~~ (~~water in oil G01N 33/2847~~)}
- D G01N 2033/184 · · · {~~herbicides, pesticides, fungicides, insecticides, or the like~~}
<administratively transferred to [G01N 33/184](#) INV>
- N G01N 33/184 · · · {~~Herbicides, pesticides, fungicides, insecticides or the like~~}
- M G01N 33/1853 · · {~~hardness~~ *Hardness* of water}
- U G01N 33/186 · · {using one or more living organisms, e.g. a fish}
- M G01N 33/1866 · · · {using microorganisms (~~G01N 33/1806 takes precedence~~)}
- D G01N 2033/1873 · · {~~ice or snow~~}
<administratively transferred to [G01N 33/1873](#) INV>
- N G01N 33/1873 · · {~~Ice or snow~~}
- M G01N 33/188 · · {Determining the state of nitrification (~~biological treatment of water by aerobic or anaerobic processes for denitrification of water C02F 3/305~~)}
- M G01N 33/22 · Fuels; ~~explosives~~ (~~liquid hydrocarbons G01N 33/28~~); *Explosives*
- M G01N 33/227 · · {Explosives, e.g. combustive properties thereof (~~detecting explosives in air G01N 33/0057~~)}
- U G01N 33/24 · Earth materials ([G01N 33/42](#) takes precedence)
- M G01N 33/241 · · {for hydrocarbon content (~~drilling mud G01N 33/2823; drilling per se E21B; prospecting G01V~~)}
- D G01N 2033/243 · · {for determining biological parameters concerning composting; biodegradability or bioavailability}
<administratively transferred to [G01N 33/243](#) INV>
- N G01N 33/243 · · {for determining biological parameters concerning composting, biodegradability or bioavailability}
- D G01N 2033/245 · · {for agricultural purposes}
<administratively transferred to [G01N 33/245](#) INV>
- N G01N 33/245 · · {for agricultural purposes}
- M G01N 33/246 · · {for water content (~~for control of watering A01G 25/167~~)}

- D G01N 2033/248
- • {related to manure as a biological product, i.e. excluding artificial fertilizers} <administratively transferred to [G01N 33/248](#) INV>
- N G01N 33/248
- • {related to manure as a biological product}
- M G01N 33/26
- Oils; ~~viscous~~ *Viscous* liquids; ~~paints~~ *Paints*; ~~inks~~ *Inks* ([G01N 33/22](#) takes precedence)
- M G01N 33/28
- • Oils {, i.e. hydrocarbon liquids} (~~{gaseous fuels G01N 33/225;}~~ edible oils or edible fats [G01N 33/03](#))
- M G01N 33/2805
- • • {investigating the resistance to heat or oxidation (~~to the weather, to corrosion, or to light G01N 17/00~~)}
- M G01N 33/2817
- • • {using a test engine (~~testing of engines G01M 15/00~~)}
- M G01N 33/2823
- • • {~~raw~~ *Raw* oil, drilling fluid or polyphasic mixtures (~~hydrocarbon content of earth materials G01N 33/241; prospecting G01V; drilling per se E21B~~)}
- M G01N 33/2829
- • • {~~mixtures of fuels, e.g. determining the RON-number~~ *Mixtures of fuels*}
- M G01N 33/2835
- • • {~~specific~~ *Specific* substances contained in the ~~oil or fuel~~ *oils or fuels*}
- M G01N 33/2841
- • • • {~~gas in oil~~ *Gas in oils*, e.g. hydrogen in insulating ~~oil~~ *oils*}
- M G01N 33/2847
- • • • {Water in ~~oil oils~~} (~~basic sediment and water G01N 33/2823; oil in water G01N 33/1833~~)}
- M G01N 33/2852
- • • • {~~alcohol/fuel mixtures~~ *Alcohol in fuels*}
- M G01N 33/2858
- • • • {~~metal~~ *Metal* particles}
- M G01N 33/2864
- • • • {~~lead~~ *Lead* content}
- M G01N 33/2882
- • • • {Markers (~~marking of fuels C10L 1/003~~)}
- M G01N 33/32
- • Paints; ~~inks~~ {~~Inks~~ (~~investigating resistance to the weather, to corrosion, to light G01N 17/00~~)}
- U G01N 33/34
- Paper
- M G01N 33/343
- • {~~paper~~ *Paper* pulp}
- M G01N 33/346
- • {~~paper~~ *Paper* sheets}
- U G01N 33/36
- Textiles
- M G01N 33/362
- • {~~material~~ *Material* before processing, e.g. bulk cotton or wool}
- M G01N 33/365
- • {~~filiform~~ *Filiform* textiles, e.g. yarns (~~for measuring diameter G01B~~)}
- M G01N 33/367
- • {Fabric or woven textiles (~~optical analysis of moving sheets G01N 21/86~~)}
- M G01N 33/38
- Concrete; ~~ceramics~~ *Lime*; ~~glass~~ *Mortar*; ~~bricks~~ *Gypsum*; ~~Bricks~~; ~~Ceramics~~; ~~Glass~~
- D G01N 33/381
- • {precious stones; pearls} <administratively transferred to [G01N 33/389](#) INV>
- M G01N 33/383
- • {Concrete; ~~or~~ cement}
- D G01N 33/385
- • {Crystals} <administratively transferred to [G01N 33/39](#) INV>
- U G01N 33/388
- • {Ceramics}
- N G01N 33/389
- {~~Precious stones; Pearls~~}
- N G01N 33/39
- {~~Crystals~~}
- M G01N 33/44
- Resins; ~~rubber~~ *Plastics*; ~~leather~~ *Rubber*; ~~Leather~~
- M G01N 33/442
- • {Resins; ~~plastics~~; *Plastics*}
- U G01N 33/48
- Biological material, e.g. blood, urine ([G01N 33/02](#), [G01N 33/26](#), [G01N 33/44](#), [G01N 33/46](#) take precedence); Haemocytometers (counting blood corpuscles distributed over a surface by scanning the surface [G06M 11/02](#))
- U G01N 33/483
- • Physical analysis of biological material
- U G01N 33/487
- • • of liquid biological material

- U G01N 33/49 Blood {(chemical methods for determining blood cell populations [G01N 33/5094](#); chemical analysis of blood groups or blood types [G01N 33/80](#))}
- M G01N 33/4905 {Determining clotting time of blood (by chemical methods [G01N 33/86](#), [C12Q 1/54](#) [C12Q 1/56](#))}
- U G01N 33/497 of gaseous biological material, e.g. breath
- U G01N 33/4972 {Determining alcohol content (for vehicle safety devices [B60K 28/06](#))}
- D G01N 2033/4975 {~~other than oxygen, carbon dioxide or alcohol, e.g. organic vapours~~
<administratively transferred to [G01N 33/4975](#) INV>
- N G01N 33/4975 {~~other than oxygen, carbon dioxide or alcohol, e.g. organic vapours~~}
- D G01N 2033/4977 {~~metabolic gass from microbes, cell cultures, plant tissues and the like~~
<administratively transferred to [G01N 33/4977](#) INV>
- N G01N 33/4977 {~~Metabolic gas from microbes, cell cultures or plant tissues~~}

Project: RP0027-F (G06Q)

- U G06Q 10/00 **Administration; Management**
- M G06Q 10/06 . Resources, workflows, human or project management; Enterprise or organisation planning; Enterprise or organisation modelling

WARNING

Group G06Q 10/06 is incomplete pending reclassification of documents from group E21B 41/0092.

Groups E21B 41/0092 and G06Q 10/06 should be considered in order to perform a complete search.

Project: RP10464-F (H01L)

- M H01L **SEMICONDUCTOR DEVICES NOT COVERED BY CLASS [H10](#) (use of semiconductor devices for measuring [G01](#); resistors in general [H01C](#); magnets, inductors or transformers [H01F](#); capacitors in general [H01G](#); electrolytic devices [H01G 9/00](#); batteries or accumulators [H01M](#); waveguides, resonators or lines of the waveguide type [H01P](#); line connectors or current collectors [H01R](#); stimulated-emission devices [H01S](#); electromechanical resonators [H03H](#); loudspeakers, microphones, gramophone pick-ups or like acoustic electromechanical transducers [H04R](#); electric light sources in general [H05B](#); printed circuits, hybrid circuits, casings or constructional details of electrical apparatus, manufacture of assemblages of electrical components [H05K](#); use of semiconductor devices in circuits having a particular application, see the subclass for the application)**

NOTES

1. This subclass is residual to class [H10](#).
2. This subclass covers:
 - a. semiconductor devices for rectifying, amplifying, oscillating or switching; their constructional details or arrangements; their assemblies or integrated devices; their manufacture or treatment;
 - b. semiconductor devices sensitive to radiation; their constructional details or arrangements; their assemblies or integrated devices; their manufacture or treatment;
 - c. semiconductor devices for light emission; their constructional details or arrangements; their assemblies or integrated devices; their manufacture or treatment;

- d. processes or apparatus for the manufacture or treatment of semiconductor or solid-state devices where the type of device is not listed under bullets ~~1 to 3a to c~~, above, or not essential;
 - e. constructional details or arrangements of semiconductor or solid-state devices not covered by class H10 and not specific to types of devices listed under bullets ~~1 to 3a to c~~, above;
 - f. packaging or assembling of semiconductor or solid-state devices covered by this subclass or by class H10.
3. In this subclass, the following terms or expressions are used with the meaning indicated:
- "wafer" means a slice of semiconductor or crystalline substrate material, which can be modified by impurity diffusion (doping), ion implantation or epitaxy, and whose active surface can be processed into arrays of discrete components or integrated circuits;
 - "solid state body" means the body of material within which, or at the surface of which, the physical effects characteristic of the device occur;
 - "electrode" is a region in or on the body of the device (other than the solid state body itself), which exerts an electrical influence on the solid state body, irrespective of whether or not an external electrical connection is made thereto. An electrode may include several portions and the term includes metallic regions which exert influence on the solid state body through an insulating region (e.g. capacitive coupling) and inductive coupling arrangements to the body. The dielectric region in a capacitive arrangement is regarded as part of the electrode. In arrangements including several portions, only those portions which exert an influence on the solid state body by virtue of their shape, size, or disposition or the material of which they are formed are considered to be part of the electrode. The other portions are considered to be "arrangements for conducting electric current to or from the solid state body" or "interconnections between solid state components formed in or on a common substrate", i.e. leads;
 - "device" means an electric circuit element; where an electric circuit element is one of a plurality of elements formed in or on a common substrate; it is referred to as a "component";
 - "complete device" is a device in its fully assembled state which may or may not require further treatment, e.g. electroforming, before it is ready for use but which does not require the addition of further structural units;
 - "parts" includes all structural units which are included in a complete device;
 - "container" is an enclosure forming part of the complete device and is essentially a solid construction in which the body of the device is placed, or which is formed around the body without forming an intimate layer thereon. An enclosure which consists of one or more layers formed on the body and in intimate contact therewith is referred to as an "encapsulation";
 - "integrated circuit" is a device where all components, e.g. diodes or resistors, are built up on a common substrate and form the device including interconnections between the components;
 - "assembly" of a device is the building up of the device from its constructional units; the term covers the provision of fillings in containers.
4. In this subclass, both the process or apparatus for the manufacture or treatment of a device and the device itself are classified, whenever both of these are described sufficiently to be of interest.
5. Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the Periodic Table of chemical elements the CPC refers. In this subclass, the system used is the 8 group system, indicated by Roman numerals in the Periodic Table thereunder.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

H01L 21/203	covered by	H01L 21/02631
H01L 21/205	covered by	H01L 21/0262
H01L 21/208	covered by	H01L 21/02623
H01L 21/301	covered by	H01L 21/30
H01L 21/328	covered by	H01L 29/66075
H01L 21/329	covered by	H01L 29/66083
H01L 21/33	covered by	H01L 29/66227
H01L 21/331	covered by	H01L 29/66234
H01L 21/332	covered by	H01L 29/66363
H01L 21/334	covered by	H01L 29/66075
H01L 21/335	covered by	H01L 29/66409
H01L 21/336	covered by	H01L 29/66477
H01L 21/337	covered by	H01L 29/66893
H01L 21/338	covered by	H01L 29/66848
H01L 21/339	covered by	H01L 29/66946
H01L 21/36 - H01L 21/368	covered by	H01L 21/02107
H01L 21/58	covered by	H01L 24/80
H01L 21/66	covered by	H01L 22/00
H01L 21/98	covered by	H01L 25/50
H01L 29/38	covered by	H01L 29/04 - H01L 29/365
H01L 29/96	covered by	H01L 29/68 - H01L 29/945

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

U H01L 21/00

Processes or apparatus adapted for the manufacture or treatment of semiconductor or solid state devices or of parts thereof

U H01L 21/02

· Manufacture or treatment of semiconductor devices or of parts thereof

U H01L 21/02104

· · {Forming layers (deposition in general [C23C](#); crystal growth in general [C30B](#))}

WARNING

Groups [H01L 21/02104](#) – [H01L 21/02694](#) are incomplete pending reclassification of documents from groups [H01L 21/06](#), [H01L 21/16](#), and [H01L 21/20](#).

Groups [H01L 21/02104](#) – [H01L 21/02694](#), [H01L 21/06](#), [H01L 21/20](#), and [H01L 21/16](#) should be considered in order to perform a complete search.

M H01L 21/02365

· · · {Forming inorganic semiconducting materials on a substrate (for light-sensitive devices [H01L 31/00](#))}

WARNINGS

1. Group [H01L 21/02365](#) is incomplete pending reclassification of documents from groups [H01L 21/06](#), [H01L 21/16](#) and [H01L 21/20](#). Groups [H01L 21/06](#), [H01L 21/16](#), and [H01L 21/20](#) should be considered in order to perform a complete search.

2. Groups [H01L 21/02365](#) – [H01L 21/02694](#) are incomplete pending reclassification of documents from groups [H01L 21/2018](#), [H01L 21/2022](#), [H01L 21/2026](#), [H01L 21/203](#), [H01L 21/2033](#), [H01L 21/2036](#), [H01L 21/205](#), [H01L 21/2053](#), [H01L 21/2056](#), [H01L 21/208](#) and [H01L 21/2085](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: Unknown (H01L)

- U H01L 21/04 . . . the devices having potential barriers, e.g. a PN junction, depletion layer or carrier concentration layer
- M H01L 21/18 . . . the devices having semiconductor bodies comprising elements of Group IV of the Periodic Table or $A_{III}B_{IV}$ compounds with or without impurities, e.g. doping materials {(H01L 21/041 - H01L 21/0425, H01L 21/045 - H01L 21/048 take precedence)}

NOTE

This group covers also processes and apparatus which, by using the appropriate technology, are clearly suitable for manufacture or treatment of devices whose bodies comprise elements of Group IV of the Periodic Table or $A_{III}B_{IV}$ compounds, even if the material used is not explicitly specified.

Project: RP10464-F (H01L)

- M H01L 21/20 . . . Deposition of semiconductor materials on a substrate, e.g. epitaxial growth {solid phase epitaxy}

WARNING

Group H01L 21/20 is impacted by reclassification into groups H01L 21/02365 – H01L 21/02694.

Groups H01L 21/20 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.

- D H01L 21/2018
—(Frozen) . . . {Selective epitaxial growth, e.g. simultaneous deposition of mono- and non-mono-semiconductor materials}

WARNING

Group H01L 21/2018 is no longer used for the classification of documents as of August 1, 2022.

The content of this group is being reclassified into groups H01L 21/02365 – H01L 21/02694.

Groups H01L 21/2018 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.

- D H01L 21/2022
—(Frozen) . . . {Epitaxial regrowth of non-monocrystalline semiconductor materials; e.g. lateral epitaxy by seeded solidification, solid-state crystallization, solid-state graphoepitaxy, explosive crystallization, grain growth in polycrystalline materials}

WARNING

Group H01L 21/2022 is no longer used for the classification of documents as of August 1, 2022.

The content of this group is being reclassified into groups H01L 21/02365 – H01L 21/02694.

Groups H01L 21/2022 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.

- D H01L 21/2026
—(Frozen) . . . {using a coherent energy beam, e.g. laser or electron beam}

WARNING

Group H01L 21/2026 is no longer used for the classification of documents as of August 1, 2022.

The content of this group is being reclassified into groups H01L 21/02365 – H01L 21/02694.

Groups H01L 21/2026 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.

- D H01L 21/203
—(Frozen)
- • • • using physical deposition, e.g. vacuum deposition, sputtering
- WARNING
Group H01L 21/203 is no longer used for the classification of documents as of August 1, 2022.
The content of this group is being reclassified into groups H01L 21/02365 – H01L 21/02694.
Groups H01L 21/203 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.
- D H01L 21/2033
—(Frozen)
- • • • • {Epitaxial deposition of elements of Group IV of the Periodic System, e.g. Si, Ge}
- WARNING
Group H01L 21/2033 is no longer used for the classification of documents as of August 1, 2022.
The content of this group is being reclassified into groups H01L 21/02365 – H01L 21/02694.
Groups H01L 21/2033 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.
- D H01L 21/2036
—(Frozen)
- • • • • {Epitaxial deposition of AIII BV compounds}
- WARNING
Group H01L 21/2036 is no longer used for the classification of documents as of August 1, 2022.
The content of this group is being reclassified into groups H01L 21/02365 – H01L 21/02694.
Groups H01L 21/2036 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.
- D H01L 21/205
—(Frozen)
- • • • • using reduction or decomposition of a gaseous compound yielding a solid condensate, i.e. chemical deposition
- WARNING
Group H01L 21/205 is no longer used for the classification of documents as of August 1, 2022.
The content of this group is being reclassified into groups H01L 21/02365 – H01L 21/02694.
Groups H01L 21/205 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.
- D H01L 21/2053
—(Frozen)
- • • • • {Epitaxial deposition of elements of Group IV of the Periodic System, e.g. Si, Ge}
- WARNING
Group H01L 21/2053 is no longer used for the classification of documents as of August 1, 2022.
The content of this group is being reclassified into groups H01L 21/02365 – H01L 21/02694.
Groups H01L 21/2053 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.
- D H01L 21/2056
—(Frozen)
- • • • • {Epitaxial deposition of A_{III}B_V compounds}
- WARNING
Group H01L 21/2056 is no longer used for the classification of documents as of August 1, 2022.
The content of this group is being reclassified into groups H01L 21/02365 – H01L 21/02694.

H01L 21/2056

(Frozen)

(continued)

Groups H01L 21/2056 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.

D H01L 21/208

—(Frozen)

- • • • using liquid deposition

WARNING

Group H01L 21/208 is no longer used for the classification of documents as of August 1, 2022.

The content of this group is being reclassified into groups H01L 21/02365 – H01L 21/02694.

Groups H01L 21/208 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.

D H01L 21/2085

—(Frozen)

- • • • • {Epitaxial deposition of $A_{III}B_{V}$ compounds}

WARNING

Group H01L 21/2085 is no longer used for the classification of documents as of August 1, 2022.

The content of this group is being reclassified into groups H01L 21/02365 – H01L 21/02694.

Groups H01L 21/2085 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.

Project: RP12231 (H02K)

U H02K 17/00

Asynchronous induction motors; Asynchronous induction generators

U H02K 17/02

- Asynchronous induction motors

M H02K 17/16

- • having rotors with internally short-circuited windings, e.g. cage rotors

WARNING

Groups [H02K 17/16](#), ~~[H02K 17/166](#)~~, ~~[H02K 17/168](#)~~, [H02K 17/18](#) and [H02K 17/20](#) are incomplete pending reclassification of documents from group(s) [H02K 17/165](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M H02K 17/165

(Frozen)

- • • {characterised by the squirrel-cage or other short-circuited windings}

WARNING

Group [H02K 17/165](#) is no longer used for the classification of documents as of May 1, 2023.

The content of this group is being reclassified into groups [H02K 17/16](#), ~~[H02K 17/166](#)~~, ~~[H02K 17/168](#)~~, [H02K 17/18](#) and [H02K 17/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

D H02K 17/166

- • • {having short-circuited rotor windings}

<administratively transferred to [H02K 17/16](#)>

Project: MP11968 (H02P)

M H02P

CONTROL OR REGULATION OF ELECTRIC MOTORS, ELECTRIC GENERATORS OR DYNAMO-ELECTRIC CONVERTERS; CONTROLLING TRANSFORMERS, REACTORS OR CHOKE COILSNOTES

1. This subclass covers arrangements for starting, regulating, electronically commutating, braking, or otherwise controlling motors, generators, dynamo-

electric converters, clutches, brakes, gears, transformers, reactors or choke coils, of the types classified in the relevant subclasses, e.g. [H01F](#), [H02K](#).

2. This subclass does not cover similar arrangements for the apparatus of the types classified in subclass [H02N](#), which arrangements are covered by that subclass.

3. In this subclass, the following terms or expressions are used with the meanings indicated:

- "control" means influencing a variable in any way, e.g. changing its direction or its value (including changing it to or from zero), maintaining it constant or limiting its range of variation;
- "regulation" means maintaining a variable at a desired value, or within a desired range of values, by comparison of the actual value with the desired value.

4. 3. In this subclass, it is desirable to add the indexing codes of groups [H02P 2101/00](#) and [H02P 2103/00](#)

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M	H02P 1/00	<p>Arrangements for starting electric motors or dynamo-electric converters (starting of synchronous motors with electronic commutators except reluctance motors, H02P 6/20, H02P 6/22; starting dynamo-electric motors rotating step by step H02P 8/04; vector control H02P 21/00)</p> <p><u>NOTE</u> {Group H02P 1/029 takes precedence over groups H02P 1/26 - H02P 1/54.}</p>
M	H02P 1/02	<ul style="list-style-type: none"> • Details <i>{of starting control}</i>
U	H02P 1/04	<ul style="list-style-type: none"> • • Means for controlling progress of starting sequence in dependence upon time or upon current, speed, or other motor parameter
M	H02P 1/10	<ul style="list-style-type: none"> • • • Manually-operated on/off switch controlling relays or contactors operating sequentially for starting a motor (sequence determined by power-operated multi-position switch H02P 1/08)
U	H02P 1/16	<ul style="list-style-type: none"> • for starting dynamo-electric motors or dynamo-electric converters
U	H02P 1/26	<ul style="list-style-type: none"> • • for starting an individual polyphase induction motor
M	H02P 1/32	<ul style="list-style-type: none"> • • • by star-/delta switching
M	H02P 3/00	<p>Arrangements for stopping or slowing electric motors, generators, or dynamo-electric converters (stopping of synchronous motors with electronic commutators except reluctance motors, H02P 6/24; stopping dynamo-electric motors rotating step by step H02P 8/24; vector control H02P 21/00)</p>
M	H02P 3/02	<ul style="list-style-type: none"> • Details <i>{of stopping control}</i>
M	H02P 3/04	<ul style="list-style-type: none"> • • Means for stopping or slowing by a separate brake, e.g. friction brake; <i>or</i> eddy-current brake (brakes F16D, H02K 49/00)
U	H02P 7/00	<p>Arrangements for regulating or controlling the speed or torque of electric DC motors</p>
U	H02P 7/06	<ul style="list-style-type: none"> • for regulating or controlling an individual dc dynamo-electric motor by varying field or armature current
U	H02P 7/08	<ul style="list-style-type: none"> • • by manual control without auxiliary power
M	H02P 7/14	<ul style="list-style-type: none"> • • • of voltage applied to the armature with or without control of field (Ward-Leonard)
U	H02P 7/18	<ul style="list-style-type: none"> • • by master control with auxiliary power

- U H02P 7/24 · · · using discharge tubes or semiconductor devices
- U H02P 7/28 · · · · using semiconductor devices
- U H02P 7/285 · · · · · controlling armature supply only
- U H02P 7/292 · · · · · · using static converters, e.g. AC to DC
- M H02P 7/295 · · · · · · · of the kind having **aone** thyristor or the like in series with the power supply and the motor
- M H02P 7/298 · · · · · controlling armature and field **supplysupplies**
- M H02P 8/00 Arrangements for controlling dynamo-electric motors of the kind having motors rotating step by step (vector control H02P 21/00)**
- M H02P 8/02 · specially adapted for single-phase or bi-pole stepper motors, e.g. watch-motors, clock-motors

NOTE
 {Groups [H02P 8/005](#) and [H02P 8/02](#) take precedence over groups [H02P 8/04](#) - [H02P 8/42](#)}
- U H02P 8/14 · Arrangements for controlling speed or speed and torque ([H02P 8/12](#), [H02P 8/22](#) take precedence)
- M H02P 8/18 · · Shaping of pulses, e.g. to reduce torque ripple *{(Reducing overshoot H02P 8/32 takes precedence)}*
- M H02P 8/36 · Protection against faults, e.g. against overheating; **or** step-out; Indicating faults *(emergency protective arrangements with automatic interruption of supply H02H 7/08)*
- M H02P 9/00 Arrangements for controlling electric generators for the purpose of obtaining a desired output (Ward-Leonard arrangements H02P 7/34; vector control H02P 21/00; feeding a network by two or more generators H02J; for charging batteries H02J 7/14)**
- M H02P 9/006 · {Means for protecting the generator by using control ([H02H 7/06](#) takes precedence; control effected upon generator excitation circuit to reduce harmful effects of overloads or transients [H02P 9/10](#))}
- M H02P 9/02 · Details *{of the control}*
- M H02P 11/00 Arrangements for controlling dynamo-electric converters (starting H02P 1/00; stopping or slowing H02P 3/00; vector control H02P 21/00; feeding a network in conjunction with a generator or another converter H02J)**
- M H02P 13/00 Arrangements for controlling transformers, reactors or choke coils, for the purpose of obtaining a desired output *(regulation systems using transformers, reactors or choke coils G05F; transformers H01F; feeding a network in conjunction with a generator or a converter H02J; control or regulation of converters H02M)*
- M H02P 15/00 Arrangements for controlling dynamo-electric brakes or clutches (controlling speed of dynamo-electric motors by means of a separate brake H02P 29/04, vector control H02P 21/00 {see provisionally also H02K 49/00 and H02P 29/0022} vector control H02P 21/00)**
- U H02P 23/00 Arrangements or methods for the control of AC motors characterised by a control method other than vector control

NOTE
 When classifying in this group, subject matter also relating to groups [H02P 21/00](#), [H02P 25/00](#) or [H02P 27/00](#) is further classified in those groups whenever appropriate.

- M H02P 23/10 · Controlling by adding a dc current (~~dc current braking H02P 3/24~~)
- U H02P 25/00 **Arrangements or methods for the control of AC motors characterised by the kind of AC motor or by structural details**
NOTE
 When classifying in this group, subject matter also relating to groups [H02P 21/00](#), [H02P 23/00](#) or [H02P 27/00](#) is further classified in those groups whenever appropriate.
- U H02P 25/02 · characterised by the kind of motor
- U H02P 25/032 · · Reciprocating, oscillating or vibrating motors
- M H02P 25/034 · · · Voice coil motors (voice coil motors driven by DC ~~power H02P 7/025~~)
- U H02P 29/00 **Arrangements for regulating or controlling electric motors, appropriate for both AC and DC motors (arrangements for starting electric motors [H02P 1/00](#); arrangements for stopping or slowing electric motors [H02P 3/00](#); control of motors that can be connected to two or more different electric power supplies [H02P 4/00](#); regulating or controlling the speed or torque of two or more electric motors [H02P 5/00](#); vector control [H02P 21/00](#))**
- M H02P 29/02 · Providing protection against overload without automatic interruption of supply (protection against faults of stepper motors [H02P 8/36](#))
- NOTE
 Informative note
 References listed below indicate places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:
 Emergency protective circuit arrangements with automatic interruption if supply, in general [H02H 7/08](#);
 Emergency protective circuit arrangements for limiting excess current or voltage without disconnection in general [H02H 7/08](#)

Project: RP12230 (H04L)

- U H04L 47/00 **Traffic control in data switching networks (arrangements for detecting or preventing errors in the information received [H04L 1/00](#))**
NOTE
 This group covers:
 1. Flow control or congestion control
 2. Queue scheduling
 3. Admission control or resource allocation
- U H04L 47/70 · Admission control; Resource allocation
WARNING
 Group [H04L 47/70](#) is impacted by reclassification into group [H04L 47/83](#).
 Groups [H04L 47/70](#) and [H04L 47/83](#) should be considered in order to perform a complete search.
- U H04L 47/82 · · {Miscellaneous aspects}
- D H04L 47/823 · · · {Prediction of resource usage}
 <administratively transferred to [H04L 47/83](#)>

Project: RP11854 (H05K)

D H05K 999/00 - **Dummy groups for the purpose of scheme testing, logistics of documents or the like**

D H05K 999/00 **dummy group**

WARNING

This group and its subgroups are not real-classification places. They are used only for the purpose of scheme testing, logistics of documents or the like.

D H05K 999/99 · dummy group

Project: RP11780 (H10N)

U H10N 15/00 **Thermoelectric devices without a junction of dissimilar materials; Thermomagnetic devices, e.g. using the Nernst-Ettingshausen effect (integrated devices or assemblies of multiple devices [H10N 19/00](#))**

U H10N 15/10 · Thermoelectric devices using thermal change of the dielectric constant, e.g. working above and below the Curie point

M H10N 15/15 · {~~Selection of~~ *Thermoelectric active* materials}

U H10N 30/00 **Piezoelectric or electrostrictive devices (integrated devices or assemblies of multiple devices [H10N 39/00](#))**

WARNING

Group [H10N 30/00](#) is impacted by reclassification into group [H10N 35/00](#).

Groups [H10N 30/00](#) and [H10N 35/00](#) should be considered in order to perform a complete search.

U H10N 30/01 · Manufacture or treatment

U H10N 30/09 · · Forming piezoelectric or electrostrictive materials

U H10N 30/098 · · · Forming organic materials

N H10N 30/101 · {~~with electrical and mechanical input and output, e.g. having combined actuator and sensor parts~~}

D H10N 30/1051 · {~~based on piezoelectric or electrostrictive films or coatings~~}
<administratively transferred to [H10N 30/704](#)>

D H10N 30/10513 · · {~~characterised by the underlying bases, e.g. substrates~~}
<administratively transferred to [H10N 30/706](#)>

D H10N 30/10516 · · · {~~intermediate layers, e.g. barrier, adhesion or growth control buffer layers~~}
<administratively transferred to [H10N 30/708](#)>

D H10N 30/1061 · {~~based on piezoelectric or electrostrictive fibres~~}
<administratively transferred to [H10N 30/702](#)>

D H10N 30/1071 · {~~with electrical and mechanical input and output, e.g. having combined actuator and sensor parts~~}
<administratively transferred to [H10N 30/101](#)>

U H10N 30/50 · having a stacked or multilayer structure

M H10N 30/501 · · {~~with having a~~ non-rectangular cross-section in *a plane parallel to the stacking direction*, e.g. polygonal, ~~trapezoidal~~ *or trapezoidal in side view*}

M H10N 30/503 · · {~~with having a~~ non-rectangular cross-section *in a plane* orthogonal to the stacking direction, e.g. polygonal, ~~circular~~ *or circular in top view*}

M H10N 30/505 · · · {~~Annular~~ *the* cross-section *being annular*}

M H10N 30/506 · · {~~of cylindrical shape with stacking in~~ *having a cylindrical shape and having stacking in the* radial direction, e.g. coaxial or spiral type rolls}

- U H10N 30/60 · having a coaxial cable structure
- N H10N 30/702 · {based on piezoelectric or electrostrictive fibres}
- N H10N 30/704 · {based on piezoelectric or electrostrictive films or coatings}
- N H10N 30/706 · · {characterised by the underlying bases, e.g. substrates}
- N H10N 30/708 · · · {Intermediate layers, e.g. barrier, adhesion or growth control buffer layers}
- U H10N 30/80 · Constructional details
WARNING
 Group [H10N 30/80](#) is impacted by reclassification into group [H10N 35/80](#).
 Groups [H10N 30/80](#) and [H10N 35/80](#) should be considered in order to perform a complete search.
- M H10N 30/802 · · {~~Drive or control circuitry or methods for~~ *Circuitry or processes for operating piezoelectric or electrostrictive devices not otherwise provided for, e.g. drive circuits*}
- M H10N 30/804 · · · {for piezoelectric transformers ~~(conversion of DC or AC power H02M; for operating discharge lamps H05B 41/282)~~}
- U H10N 30/85 · Piezoelectric or electrostrictive active materials
WARNING
 Group [H10N 30/85](#) is impacted by reclassification into group [H10N 35/85](#).
 Groups [H10N 30/85](#) and [H10N 35/85](#) should be considered in order to perform a complete search.
- U H10N 30/853 · · · Ceramic compositions
- M H10N 30/8548 · · · · {Lead ~~-~~based oxides}
- M H10N 30/8554 · · · · · {Lead ~~zirconium titanate~~ *zirconium titanate [PZT]* based}
- M H10N 30/8561 · · · · · {Bismuth ~~-~~based oxides}
- U H10N 30/87 · Electrodes or interconnections, e.g. leads or terminals
- M H10N 30/872 · · · {~~Connection~~ *Interconnections, e.g. connection* electrodes of multilayer piezoelectric or electrostrictive devices, ~~e.g. external electrodes~~}
- M H10N 30/877 · · · {Conductive materials ~~(in general H01B 1/00)~~}
- U H10N 30/88 · Mounts; Supports; Enclosures; Casings
- M H10N 30/883 · · · {~~Further insulation means against~~ *Additional insulation means preventing* electrical, physical or chemical damage, e.g. protective coatings}
- M H10N 30/886 · · · {~~Mechanical~~ *Additional mechanical* prestressing means, e.g. springs ~~(springs in general F16F 1/00)~~}
- U H10N 60/00 Superconducting devices (integrated devices or assemblies of multiple devices [H10N 69/00](#))**
- U H10N 60/01 · Manufacture or treatment
- M H10N 60/0156 · · {of devices comprising Nb or an alloy of Nb with one or more of the elements of group [4/IVB](#), e.g. ~~Ti, Zr, Hf~~ *titanium, zirconium or hafnium*}
- U H10N 60/0268 · · {of devices comprising copper oxide}
- M H10N 60/0296 · · · {Processes for depositing or forming *copper oxide* superconductor layers}
- M H10N 60/0352 · · · · {from a suspension or slurry, e.g. screen printing ~~or doctor blade casting~~; ~~doctor blade casting~~}
- M H10N 60/0381 · · · · · {by evaporation ~~independent of heat source~~, e.g. MBE}
- M H10N 60/0521 · · · · · {by pulsed laser deposition, e.g. laser sputtering}; ~~laser ablation~~}
- M H10N 60/0548 · · · · · {by ~~precursor deposition followed by after-deposition and subsequent~~ treatment, e.g. oxidation *of pre-deposited material*}

M	H10N 60/0661	. . . { After-treatment <i>Processes performed after copper oxide formation</i> , e.g. patterning}
M	H10N 60/0716 { Passivation <i>Passivating</i> }
M	H10N 60/0744	. . . {Manufacture or deposition of contacts or electrodes}
M	H10N 60/0772	. . . {Processes including the use of <i>non-gaseous</i> precursors}
M	H10N 60/0801	. . . { Processes peculiar to the manufacture <i>Manufacture</i> or treatment of filaments or composite wires}
M	H10N 60/0884	. . {Treatment of superconductor layers by irradiation, e.g. ion-beam, electron-beam, laser beam; <i>or</i> X-rays (irradiation devices G21K, H01J)}
U	H10N 60/10	. Junction-based devices
M	H10N 60/11	. . {Single- electron tunnelling devices}
U	H10N 60/80	. Constructional details
U	H10N 60/85	. . Superconducting active materials
M	H10N 60/851	. . . {Organic materials <i>superconductors</i> }
M	H10N 60/853 {Fullerene superconductors, e.g. soccerball-shaped allotrope <i>soccer ball-shaped allotropes</i> of carbon, e.g. C ₆₀ ; <i>or</i> C ₉₄ (fullerenes in general C07C-13/00)}
M	H10N 60/855	. . . {Ceramic materials <i>superconductors</i> }
U	H10N 60/857 {comprising copper oxide}
M	H10N 60/858 { Multi-layered <i>having multilayered</i> structures, e.g. superlattices}
U	H10N 70/00	Solid-state devices having no potential barriers, and specially adapted for rectifying, amplifying, oscillating or switching (integrated devices or assemblies of multiple devices H10N 79/00)
U	H10N 70/011	. {Manufacture or treatment of multistable switching devices}
M	H10N 70/021	. . {Formation of the switching material <i>switching materials</i> , e.g. layer deposition <i>deposition of layers</i> }
M	H10N 70/041	. . {Modification of the switching material <i>switching materials after formation</i> , e.g. post-treatment, doping <i>doping (shaping H10N 70/061)</i> }
M	H10N 70/061	. . { Patterning of the switching material <i>Shaping switching materials</i> }
U	H10N 70/20	. Multistable switching devices, e.g. memristors
M	H10N 70/253	. . {having three or more terminals <i>electrodes</i> , e.g. transistor-like devices}
M	H10N 70/257	. . { based on <i>having switching assisted by</i> radiation or particle beam assisted switching , e.g. optically controlled devices}
U	H10N 70/801	. {Constructional details of multistable switching devices}
U	H10N 70/821	. . {Device geometry}
U	H10N 70/826	. . . {adapted for essentially vertical current flow, e.g. sandwich or pillar type devices}
M	H10N 70/8265 {on sidewalls of dielectric structures, e.g. mesa or cup-type-shaped or <i>cup-shaped</i> devices}
U	H10N 70/881	. . {Switching materials}
M	H10N 70/884	. . . { Other compounds of groups 13-15; <i>based on at least one element of group IIIA, IVA or VA</i> , e.g. elemental or compound semiconductors (<i>compounds of sulfur, selenium or tellurium, e.g. chalcogenides H10N 70/882; oxides or nitrides H10N 70/883</i>)}

- U H10N 89/00** **Integrated devices, or assemblies of multiple devices, comprising at least one bulk negative resistance effect element covered by group [H10N 80/00](#)**
WARNING
 Group [H10N 89/00](#) is incomplete pending reclassification of documents from groups [H01L 25/04](#), [H01L 25/065](#), [H01L 25/0652](#), [H01L 25/0655](#), [H01L 25/0657](#), [H01L 25/16](#), [H01L 25/162](#), [H01L 25/165](#), [H01L 25/167](#) and [H01L 25/18](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- M H10N 89/02 · {Gunn-effect *integrated* devices}
- U H10N 99/00** **Subject matter not provided for in other groups of this subclass**
- M H10N 99/03 · {Devices using Mott metal-insulator transition, e.g. field-effect transistors-effect transistor-like devices}
- M H10N 99/05 · {~~Quantum devices~~ *Devices based on quantum mechanical effects*, e.g. quantum interference devices, ~~metal single or metal single~~-electron transistors}

Project: RP10457 (Y10S)

- U Y10S 83/00** **Cutting**
- C Y10S 83/01 · Safety devices

Project: RP10457 (Y10T)

- U Y10T 83/00** **Cutting**
- C Y10T 83/081 · With randomly actuated stopping means
- U Y10T 83/202 · With product handling means
- C Y10T 83/2066 · · By fluid current
- C Y10T 83/2068 · · · Plural blasts directed against plural product pieces
- C Y10T 83/207 · · · By suction means
- U Y10T 83/687 · By tool reciprocable along elongated edge
- C Y10T 83/688 · · With dynamic balancing or shock absorbing means
- C Y10T 83/6885 · · With tool of another type
- C Y10T 83/689 · · With means to change to other type tool
- C Y10T 83/69 · · Stored energy furnishes drive in one direction
- U Y10T 83/6905 · · With tool in-feed
- U Y10T 83/693 · · · Of rectilinearly reciprocating tool
- C Y10T 83/6935 · · · · With in-feed by pivoting carrier
- U Y10T 83/6945 · · · With passive means to guide tool directly
- C Y10T 83/695 · · · · By plural opposed guide surfaces
- C Y10T 83/6955 · · · · · Having relative adjustment between guide surfaces
- C Y10T 83/696 · · · · · With relative adjustment between guide and work or work-support
- C Y10T 83/6965 · · · · · · By or with additional movable work-support portion
- C Y10T 83/697 · · · · · · By rotation about an axis parallel to the work-support surface
- C Y10T 83/6975 · · · · · · By rotation about an axis perpendicular to the work-support surface
- C Y10T 83/699 · · · Of tool carrier on single moving pivot
- C Y10T 83/6995 · · · · Pivot moves in closed loop
- C Y10T 83/70 · · · · Pivot moves to and fro in arcuate path
- C Y10T 83/7005 · · · · · Axis of arcuate path moves during cutting

- C Y10T 83/701 Pivot moves to and fro in rectilinear path
- U Y10T 83/707 . By endless band or chain knife
- C Y10T 83/7089 . . Including contiguous oppositely moving knife portions
- U Y10T 83/7101 . . With tool in-feed
- U Y10T 83/7114 . . . Including means to permit arcuate in-feed motion
- U Y10T 83/712 Including means to relocate path of in-feed motion
- C Y10T 83/7126 Angular relative previous path
- U Y10T 83/7133 . . . By gravity
- C Y10T 83/7139 With fluid in-feed regulating means
- U Y10T 83/7158 . . Including plural cutting zones
- C Y10T 83/7164 . . . With adjustment of separation between zones
- C Y10T 83/717 By lever means
- C Y10T 83/7176 By screw-threaded means
- C Y10T 83/7183 . . . Including "figure-8" band
- U Y10T 83/7195 . . Including means to adjust relationship between band and work-support surface
- C Y10T 83/722 . . . By varying distance between band and work-support surface
- U Y10T 83/7226 . . With means to guard the tension
- C Y10T 83/7239 . . . With means to vary distance between pulley or sprocket axes
- C Y10T 83/7245 And angular relationship of axes
- C Y10T 83/7251 Including means to yieldably bias pulley
- C Y10T 83/7258 By fluid means
- U Y10T 83/768 . Rotatable disc tool pair or tool and carrier
- U Y10T 83/7684 . . With means to support work relative to tool[s]
- U Y10T 83/7693 . . . Tool moved relative to work-support during cutting
- C Y10T 83/7697 Tool angularly adjustable relative to work-support
- U Y10T 83/7701 . . . Supporting surface and tool axis angularly related
- C Y10T 83/7705 Adjustable angular relationship
- C Y10T 83/7734 . . With guard for tool
- U Y10T 83/929 . Tool or tool with support
- C Y10T 83/9319 . . Toothed blade or tooth therefor
- C Y10T 83/9321 . . . With means to vary tooth position
- C Y10T 83/9324 . . . With additional cutting means
- C Y10T 83/9326 . . . Plural separable sections
- C Y10T 83/9329 Tooth separable from blade
- C Y10T 83/9331 By independent connecting element
- C Y10T 83/9333 Transversely movable
- C Y10T 83/9336 Arcuately movable
- C Y10T 83/9338 With additional element to prevent movement of connecting element
- C Y10T 83/9341 Rectilinearly movable
- C Y10T 83/9343 By deformation
- C Y10T 83/9346 . . . Uniformly varying teeth or tooth spacing
- C Y10T 83/9348 . . . Undulating tooth arrangement
- C Y10T 83/935 . . . Plural tooth groups

- C Y10T 83/9353 . . . Including raker tooth group
- C Y10T 83/9355 . . . Including intermediate raker tooth
- C Y10T 83/9358 . . . Series of dissimilar teeth
- C Y10T 83/936 . . . Series of allochiral teeth
- C Y10T 83/9362 . . . Teeth having transversely curved cutting edge
- C Y10T 83/9365 . . . Teeth having cutting edge parallel to blade surface
- C Y10T 83/9367 . . . Teeth having cutting edge perpendicular to blade surface
- C Y10T 83/9454 . . Reciprocable type