

A01B		
N	A01B 49/00	Note(s) [2025.01] Auxiliary devices attached to machines of a different kind, e.g. harrows attached to ploughs, see relevant groups in A01B 3/00-A01B 47/00 for the machines.
M	A01B 49/00	Combined machines (auxiliary devices attached to machines of a different kind, e.g. harrows attached to ploughs, see the relevant groups for the machines) [1,2006.01]
A01G		
M	A01G 9/14	• Greenhouses (cloches A01G 13/04) [1,2006.01]
M	A01G 13/00	Protection of plants (apparatus for the destruction of vermin or noxious animals A01M ; use of chemical materials therefor, composition of protective materials, e.g. grafting wax, A01N greenhouses A01G 9/14 [1,2006.01]
D	A01G 13/02	(transferred to A01G 13/20-A01G 13/24, A01G 13/27-A01G 13/39)
D	A01G 13/04	(transferred to A01G 13/26)
N	A01G 13/20	• Protective coverings for plants [2025.01]
N	A01G 13/21	• • providing overhead protection, i.e. canopies [2025.01]
N	A01G 13/22	• • • for individual plants [2025.01]
N	A01G 13/23	• • providing lateral protection, e.g. from wind [2025.01]
N	A01G 13/24	• • Tunnels for covering rows of plants [2025.01]
N	A01G 13/26	• • Cloches [2025.01]
N	A01G 13/27	• • protecting specific parts of plants, e.g. roots, trunks or fruits [2025.01]
N	A01G 13/28	• • protecting young plants [2025.01]
N	A01G 13/29	• • Arrangements for laying out or removing plant coverings [2025.01]
N	A01G 13/30	• Ground coverings [2025.01]
N	A01G 13/31	• • for individual plants [2025.01]
N	A01G 13/32	• • Mats; Nets; Sheets or films [2025.01]
N	A01G 13/33	• • • Sheets or films [2025.01]
N	A01G 13/35	• • Mulches, i.e. loose material [2025.01]
N	A01G 13/37	• • Arrangements for laying out or removing ground coverings [2025.01]
N	A01G 13/38	• • Anchoring means for ground coverings [2025.01]
N	A01G 13/39	• • Arrangements for perforating installed ground coverings [2025.01]
A01J		
M	A01J 11/00	Apparatus for treating milk (preservation of milk or milk preparations A23B 11/10 ; dairy concentration, evaporation or drying A23C 1/00 ; preservation of milk or milk preparations A23C 3/00) [1,2006.01]
A01K		
D	A01K 67/033	(transferred to A01K 67/30-A01K 67/68)
D	A01K 67/04	(transferred to A01K 67/35, A01K 67/68)
N	A01K 67/30	• Rearing or breeding invertebrates [2025.01]
N	A01K 67/31	• • Arrangements for releasing thereof into the environment [2025.01]
N	A01K 67/32	• • Snails (genetically modified molluscs A01K 67/62) [2025.01]
N	A01K 67/33	• • Earthworms (genetically modified worms A01K 67/63) [2025.01]
N	A01K 67/34	• • Insects (genetically modified insects A01K 67/68) [2025.01]
N	A01K 67/35	• • • Silkworms [2025.01]
N	A01K 67/36	• • • Industrial rearing of insects, e.g. insect farms [2025.01]
N	A01K 67/362	• • • • Containers or crates [2025.01]
N	A01K 67/364	• • • • Heating, ventilating or air conditioning [2025.01]
N	A01K 67/366	• • • • Insect counting or dosing systems [2025.01]
N	A01K 67/368	• • • • Feeding; Watering [2025.01]
N	A01K 67/60	• New or modified breeds of invertebrates [2025.01]
N	A01K 67/61	• • Genetically modified invertebrates, e.g. transgenic or polyploid [2025.01]
N	A01K 67/62	• • • Genetically modified molluscs [2025.01]
N	A01K 67/63	• • • Genetically modified worms [2025.01]
N	A01K 67/64	• • • • Genetically modified nematodes [2025.01]
N	A01K 67/65	• • • Genetically modified arthropods [2025.01]
N	A01K 67/67	• • • • Genetically modified crustaceans [2025.01]

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N	A01K 67/68	• • • • Genetically modified insects [2025.01]
A01N		
D	A01N 1/02	(transferred to A01N 1/10-A01N 1/168)
N	A01N 1/10	• Preservation of living parts [2025.01]
N	A01N 1/12	• • Chemical aspects of preservation [2025.01]
N	A01N 1/122	• • • Preservation or perfusion media [2025.01]
N	A01N 1/124	• • • • Disinfecting agents, e.g. antimicrobials [2025.01]
N	A01N 1/125	• • • • Freeze protecting agents, e.g. cryoprotectants or osmolarity regulators [2025.01]
N	A01N 1/126	• • • • Physiologically active agents, e.g. antioxidants or nutrients [2025.01]
N	A01N 1/128	• • • Chemically defined matrices for immobilising, holding or storing living parts, e.g. alginate gels; Chemically altering living parts, e.g. by cross-linking [2025.01]
N	A01N 1/14	• • Mechanical aspects of preservation; Apparatus or containers therefor [2025.01]
N	A01N 1/142	• • • Apparatus [2025.01]
N	A01N 1/143	• • • • for organ perfusion [2025.01]
N	A01N 1/144	• • • • for temperature control, e.g. refrigerators or freeze-drying apparatus [2025.01]
N	A01N 1/145	• • • • • Stationary or portable vessels generating cryogenic temperatures, e.g. liquid nitrogen baths [2025.01]
N	A01N 1/146	• • • Non-refrigerated containers specially adapted for transporting or storing living parts whilst preserving [2025.01]
N	A01N 1/147	• • • • Carriers for immersion in cryogenic fluid for slow freezing or vitrification [2025.01]
N	A01N 1/148	• • • • with provisions specially adapted for transporting [2025.01]
N	A01N 1/16	• • Physical preservation processes [2025.01]
N	A01N 1/162	• • • Temperature processes, e.g. following predefined temperature changes over time [2025.01]
N	A01N 1/165	• • • Pressure processes, e.g. following predefined pressure changes over time [2025.01]
N	A01N 1/168	• • • using electromagnetic fields or radiation; using acoustic waves or corpuscular radiation [2025.01]

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M	A01N 25/00	Note(s) [3,2006.01] <ol style="list-style-type: none"> 1. Attention is drawn to the definitions of groups of chemical elements following the title of section C. 2. In groups A01N 27/00-A01N 65/00, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, an active ingredient is classified in the last appropriate place. 3. A composition, i.e. a mixture of two or more active ingredients is classified in the last of groups A01N 27/00-A01N 65/00 that provides for at least one of these active ingredients. 4. Any part of a composition which is not identified by the classification according to Note (3), and which itself is determined to be novel and non-obvious, must also be classified in the last appropriate place in groups A01N 27/00-A01N 65/00. The part can be either a single ingredient or a composition in itself. 5. Any part of a composition which is not identified by the classification according to Note (3) or (4), and which is considered to represent information of interest for search, may also be classified in the last appropriate place in groups A01N 27/00-A01N 65/00. This can, for example, be the case when it is considered of interest to enable searching of compositions using a combination of classification symbols. Such non-obligatory classification should be given as "additional information". 6. Where a compound is described as existing in tautomeric forms, it is classified as if existing in the form which is classified last in the system. 7. Compounds covered by different main groups according to alternatively specified parts of their formulae are classified in every one of the relevant main groups. 8. Salts formed between two or more organic compounds are classified as the compound providing the essential ion and it is also classified as the compound providing the other ion. 9. Salts or metal chelates of an organic compound are classified as that compound. 10. In this subclass, a foodstuff is not considered as an active ingredient. 11. Different materials applied in sequence, at different times, are considered as a mixture of all materials employed. 12. Synergistic or potentiated compositions are classified as if the synergist or potentiator were an active ingredient. 13. In groups A01N 25/00-A01N 65/00, the symbol X means nitrogen, oxygen, sulfur or a halogen; Y means nitrogen, oxygen or sulfur. A dotted line between atoms indicates an optional bond, e.g. ... indicates one or two single bonds or a double bond. 	
M	A21D	TREATMENT , e.g. PRESERVATION, OF FLOUR OR DOUGH FOR BAKING, e.g. BY ADDITION OF MATERIALS; BAKING; BAKERY PRODUCTS; PRESERVATION THEREOF (<i>preservation of flour or dough before baking A23B 40/00 ; preservation of bakery products A23B 45/00</i>) [1,2006.01]	
M	A21D	Subclass index	
		PRODUCTS BEFORE BAKING; TREATMENT OR CONSERVATION -THEREOF BAKING OF DOUGH BAKERY PRODUCTS; PRESERVATION IMPROVING OR REFRESHING THEREOF	A21D 10/00; A21D 2/00-A21D 8/00 <i>A21D 2/00-A21D 6/00</i> A21D 8/00 A21D 13/00; A21D 15/00, A21D 17/00
D	A21D 4/00	(transferred to A23B 40/00)	
C	A21D 6/00	Other treatment of flour or dough before baking, e.g. cooling, irradiating , heating or heating (<i>preservation of flour or dough before baking A23B 40/00</i>) [1,2,2006.01,2025.01]	
C	A21D 15/00	Preserving-<i>Improving</i> finished bakery products; Improving-(<i>refreshing bakery products A21D 17/00</i>) [1,2,2006.01,2025.01]	
C	A21D 15/02	• by cooling [2,2006.01,2025.01]	
C	A21D 15/04	• by heat treatment [2,2006.01,2025.01]	
C	A21D 15/06	• by irradiation [2,2006.01,2025.01]	
C	A21D 15/08	• by coating [2,2006.01,2025.01]	

M	A23	FOODS OR FOODSTUFFS ; TREATMENT THEREOF, NOT COVERED BY OTHER CLASSES , FOODSTUFFS OR NON-ALCOHOLIC BEVERAGES ; PREPARATION, TREATMENT OR PRESERVATION THEREOF
M	A23B	PRESERVING, e.g. BY CANNING, MEAT, FISH, EGGS, FRUIT, VEGETABLES, EDIBLE SEEDSPRESERVATION OF FOODS, FOODSTUFFS OR NON-ALCOHOLIC BEVERAGES; CHEMICAL RIPENING OF FRUIT OR VEGETABLES ; THE PRESERVED, RIPENED, OR CANNED PRODUCTS
N	A23B	Subclass index
		PRESERVATION OF FOODS, FOODSTUFFS OR NON-ALCOHOLIC BEVERAGES
		<i>in general</i> A23B 2/00
		<i>of specific products</i>
		<i>meat, sausages, fish or fish products</i> A23B 4/00
		<i>eggs or egg products</i> A23B 5/00
		<i>fruit or vegetables</i> A23B 7/00
		<i>edible seeds, e.g. cereals</i> A23B 9/00
		<i>milk or dairy products</i> A23B 11/00
		<i>edible oils or fats</i> A23B 20/00
		<i>flour or dough before baking</i> A23B 40/00
		<i>finished bakery products</i> A23B 45/00
		<i>non-alcoholic beverages</i> A23B 70/00
		<i>Pulses</i> A23B 75/00
		<i>cocoa or cocoa products</i> A23B 80/00
		<i>tea, tea substitutes or herbal tea</i> A23B 85/00
		<i>coffee or coffee substitutes</i> A23B 90/00
		CHEMICAL RIPENING OF FRUIT OR VEGETABLES A23B 7/00
		SUBJECT MATTER NOT PROVIDED FOR IN OTHER GROUPS OF THIS SUBCLASS A23B 99/00
N	A23B 2/00	Note(s) [2025.01] This group <u>covers</u> processes or apparatus for the preservation of foods or foodstuffs, in general, i.e. where the nature of the product is not relevant or not specified.
N	A23B 2/00	Preservation of foods or foodstuffs, in general [2025.01]
N	A23B 2/05	• by heating using irradiation or electric treatment (drying or kilning A23B 2/90) [2025.01]
N	A23B 2/08	• • using microwaves or dielectric heating [2025.01]
N	A23B 2/10	• by treatment with pressure variation, shock, acceleration or shear stress [2025.01]
N	A23B 2/20	• by heating materials in packages which are progressively transported, continuously or stepwise, through the apparatus [2025.01]
N	A23B 2/22	• • with packages on endless chain or band conveyors [2025.01]
N	A23B 2/25	• • with packages transported along a helical path [2025.01]
N	A23B 2/28	• • with packages on a revolving platform [2025.01]
N	A23B 2/30	• by heating materials in packages which are not progressively transported through the apparatus [2025.01]
N	A23B 2/33	• • with packages in intercommunicating chambers through which the heating medium is circulated [2025.01]
N	A23B 2/37	• • with packages moving on the spot [2025.01]
N	A23B 2/40	• by heating loose unpacked materials [2025.01]
N	A23B 2/42	• • while they are progressively transported through the apparatus [2025.01]
N	A23B 2/44	• • • with transport along plates [2025.01]
N	A23B 2/46	• • • with transport through tubes [2025.01]
N	A23B 2/48	• • with the materials in spray form [2025.01]
N	A23B 2/50	• by irradiation without heating [2025.01]
N	A23B 2/53	• • with ultraviolet light [2025.01]
N	A23B 2/57	• • by treatment with ultrasonic waves [2025.01]
N	A23B 2/60	• by treatment with electric currents without heating effect [2025.01]

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N	A23B 2/70	• by treatment with chemicals [2025.01]
N	A23B 2/704	•• in the form of gases, e.g. fumigation; Compositions or apparatus therefor [2025.01]
N	A23B 2/708	••• in a controlled atmosphere, e.g. partial vacuum, comprising only CO ₂ , N ₂ , O ₂ or H ₂ O [2025.01]
N	A23B 2/712	•••• in which an absorbent is placed or used (packages for foodstuffs with provision for absorbing fluids B65D 81/26) [2025.01]
N	A23B 2/717	••••• Oxygen absorbent [2025.01]
N	A23B 2/721	••• in a controlled atmosphere comprising other gases in addition to CO ₂ , N ₂ , O ₂ or H ₂ O [2025.01]
N	A23B 2/725	•• in the form of liquids or solids [2025.01]
N	A23B 2/729	••• Organic compounds; Microorganisms; Enzymes [2025.01]
N	A23B 2/733	Note(s) [2025.01] In groups A23B 2/733-A23B 2/779, 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
N	A23B 2/733	•••• Compounds of undetermined constitution obtained from animals or plants [2025.01]
N	A23B 2/742	•••• Organic compounds containing oxygen [2025.01]
N	A23B 2/746	••••• with singly-bound oxygen [2025.01]
N	A23B 2/75	••••• with doubly-bound oxygen [2025.01]
N	A23B 2/754	••••• containing carboxyl groups [2025.01]
N	A23B 2/758	•••••• Carboxylic acid esters [2025.01]
N	A23B 2/762	•••• Organic compounds containing nitrogen [2025.01]
N	A23B 2/767	•••• Organic compounds containing sulfur [2025.01]
N	A23B 2/771	•••• Organic compounds containing hetero rings [2025.01]
N	A23B 2/775	•••• Organic compounds containing phosphorus [2025.01]
N	A23B 2/779	•••• Sugars; Derivatives thereof [2025.01]
N	A23B 2/783	•••• Microorganisms; Enzymes [2025.01]
N	A23B 2/788	••• Inorganic compounds [2025.01]
N	A23B 2/792	•• Apparatus for preserving using liquids [2025.01]
N	A23B 2/796	•• Apparatus for preserving using solids [2025.01]
N	A23B 2/80	• Freezing; Subsequent thawing; Cooling [2025.01]
N	A23B 2/82	•• Thawing subsequent to freezing [2025.01]
N	A23B 2/85	•• with addition of chemicals [2025.01]
N	A23B 2/88	••• with direct contact between the food and the chemical, e.g. liquid N ₂ at cryogenic temperature [2025.01]
N	A23B 2/90	• by drying or kilning; Subsequent reconstitution [2025.01]
N	A23B 2/91	•• with addition of chemicals before or during drying [2025.01]
N	A23B 2/92	•• Freeze drying [2025.01]
N	A23B 2/93	•• Spray drying [2025.01]
N	A23B 2/94	•• Thin-layer drying, drum drying or roller drying [2025.01]
N	A23B 2/95	•• Fluidised-bed drying [2025.01]
N	A23B 2/96	•• Foam drying [2025.01]
N	A23B 2/97	•• using irradiation or electric treatment, e.g. ultrasonic waves [2025.01]
N	A23B 4/00	<u>Preservation of specific foods, foodstuffs or non-alcoholic beverages; Chemical ripening of fruit or vegetables [2025.01]</u>
M	A23B 4/00	General methods for preserving Preservation of meat, sausages, fish or fish products [2,2006.01]
L	A23B 5/00	Preservation of eggs or egg products [1,2006.01]
M	A23B 7/00	Preservation of fruit or chemical-vegetables ; Chemical ripening of fruit or vegetables [1,3,2006.01]
C	A23B 9/00	Preservation of edible seeds, e.g. cereals (preservation of pulses A23B 75/00) [1,2006.01,2025.01]
N	A23B 11/00	Preservation of milk or dairy products [2025.01]
N	A23B 11/10	• Preservation of milk or milk preparations [2025.01]

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N	A23B 11/12	• • by heating (by irradiation, e.g. by microwaves A23B 11/16) [2025.01]
N	A23B 11/123	• • • in packages [2025.01]
N	A23B 11/127	• • • • progressively transported through the apparatus [2025.01]
N	A23B 11/13	• • • the materials being loose unpacked [2025.01]
N	A23B 11/133	• • • • and progressively transported through the apparatus [2025.01]
N	A23B 11/137	• • • • • in direct contact with the heating medium, e.g. steam [2025.01]
N	A23B 11/14	• • by freezing or cooling [2025.01]
N	A23B 11/145	• • • in packages [2025.01]
N	A23B 11/16	• • by irradiation, e.g. by microwaves [2025.01]
N	A23B 11/18	• • by addition of preservatives (addition of microorganisms or enzymes A23C 9/12; addition of other substances A23C 9/152) [2025.01]
N	A23B 11/20	• Preservation of milk substitutes [2025.01]
N	A23B 11/22	• • containing non-milk components as source of fats or proteins (preservation of whey or whey preparations containing non-milk components as source of fats or proteins A23B 11/84) [2025.01]
N	A23B 11/23	• • • containing non-milk fats but no non-milk proteins (A23B 11/27, A23B 11/29 take precedence) [2025.01]
N	A23B 11/25	• • • containing non-milk proteins (A23B 11/27, A23B 11/29 take precedence) [2025.01]
N	A23B 11/27	• • • containing caseinates but no other milk proteins or milk fats [2025.01]
N	A23B 11/29	• • • containing or not lactose but no other milk components as source of fats, carbohydrates or proteins [2025.01]
N	A23B 11/30	• Preservation of cream or cream preparations [2025.01]
N	A23B 11/35	• • by addition of preservatives (containing or treated with microorganisms, enzymes or antibiotics A23C 13/16) [2025.01]
N	A23B 11/40	• Preservation of butter or butter preparations [2025.01]
N	A23B 11/45	• • by addition of preservatives [2025.01]
N	A23B 11/50	• Preservation of buttermilk or buttermilk preparations [2025.01]
N	A23B 11/55	• • containing, or treated with, microorganisms or enzymes [2025.01]
N	A23B 11/60	• Preservation of cheese or cheese preparations [2025.01]
N	A23B 11/65	• • by addition of preservatives [2025.01]
N	A23B 11/67	• • • of antibiotics [2025.01]
N	A23B 11/70	• Preservation of cheese substitutes [2025.01]
N	A23B 11/75	• • containing neither milk components, nor caseinate, nor lactose, as sources of fats, proteins or carbohydrates [2025.01]
N	A23B 11/80	• Preservation of whey or whey preparations (preservation of milk or milk preparations A23B 11/10) [2025.01]
N	A23B 11/82	• • containing, or treated with, microorganisms or enzymes [2025.01]
N	A23B 11/84	• • containing non-milk components as source of fats or proteins [2025.01]
N	A23B 11/86	• • Mixtures of whey with milk products or milk components [2025.01]
N	A23B 11/87	• • containing other organic additives, e.g. vegetable or animal products [2025.01]
N	A23B 11/88	• • containing inorganic additives [2025.01]
N	A23B 20/00	Preservation of edible oils or fats [2025.01]
N	A23B 20/10	• Preservation of edible oil or fat compositions containing an aqueous phase, e.g. margarines [2025.01]
N	A23B 20/30	• Preservation of other edible oils or fats, e.g. shortenings or cooking oils [2025.01]
N	A23B 40/00	Preservation of flour or dough before baking [2025.01]
N	A23B 40/10	• by cooling [2025.01]
N	A23B 40/30	• by heating [2025.01]
N	A23B 40/50	• by irradiation [2025.01]
N	A23B 40/60	• by storage in an inert atmosphere [2025.01]
N	A23B 45/00	Preservation of finished bakery products [2025.01]
N	A23B 45/10	• by cooling [2025.01]
N	A23B 45/30	• by heating [2025.01]
N	A23B 45/50	• by irradiation [2025.01]
N	A23B 45/70	• by coating [2025.01]

N	A23B 70/00	Preservation of non-alcoholic beverages (preservation of beverages from legumes A23B 75/10; preservation of beverages containing tea, tea substitutes or herbal tea A23B 85/10; preservation of beverages containing coffee or coffee substitutes A23B 90/10) [2025.01]
N	A23B 70/10	• by addition of preservatives [2025.01]
N	A23B 70/20	• by cooling [2025.01]
N	A23B 70/30	• by heating [2025.01]
N	A23B 70/35	• • by irradiation or electric treatment [2025.01]
N	A23B 70/50	• by irradiation or electric treatment, without heating [2025.01]
N	A23B 75/00	Preservation of pulses; Preservation of products from legumes [2025.01]
N	A23B 75/10	• Preservation of beverages from legumes, e.g. soy drinks [2025.01]
N	A23B 80/00	Preservation of cocoa or cocoa products [2025.01]
N	A23B 85/00	Preservation of tea, tea substitutes or herbal tea [2025.01]
N	A23B 85/10	• Preservation of beverages containing tea, tea substitutes or herbal tea [2025.01]
N	A23B 90/00	Preservation of coffee or coffee substitutes [2025.01]
N	A23B 90/10	• Preservation of beverages containing coffee or coffee substitutes [2025.01]
N	A23B 99/00	Subject matter not provided for in other groups of this subclass [2025.01]
M	A23C	DAIRY PRODUCTS, e.g. MILK, BUTTER OR CHEESE; MILK OR CHEESE SUBSTITUTES; MAKING OR TREATMENT THEREOF (obtaining protein compositions for foodstuffs A23J 1/00 preservation thereof A23B 11/00)
M	A23C	Note(s) [3] This subclass covers: <ul style="list-style-type: none"> the chemical aspects of making dairy products; the apparatus used for performing techniques provided for therein, e.g. for concentration, evaporation, drying, preservation, or sterilisation, unless such apparatus is specifically provided for in another subclass, e.g. in subclass A01J for treatment of milk or cream for manufacture of butter or cheese.
M	A23C 1/00	Concentration, evaporation or drying (A23C 3/00 takes precedence; products obtained thereby A23C 9/00) [1,3,2006.01]
D	A23C 3/00	(transferred to A23B 11/10)
D	A23C 3/02	(transferred to A23B 11/12)
D	A23C 3/023	(transferred to A23B 11/123)
D	A23C 3/027	(transferred to A23B 11/127)
D	A23C 3/03	(transferred to A23B 11/13)
D	A23C 3/033	(transferred to A23B 11/133)
D	A23C 3/037	(transferred to A23B 11/137)
D	A23C 3/04	(transferred to A23B 11/14)
D	A23C 3/05	(transferred to A23B 11/145)
D	A23C 3/07	(transferred to A23B 11/16)
D	A23C 3/08	(transferred to A23B 11/18)
C	A23C 7/00	Other dairy technology (preservation of milk or dairy products A23B 11/00) [1,2006.01,2025.01]
M	A23C 9/00	Milk preparations; Milk powder or milk powder preparations (mixtures of whey with milk products or milk components A23C 21/06 ; preservation of milk or milk preparations A23B 11/10) [1,3,2006.01]
C	A23C 11/00	Milk substitutes, e.g. coffee whitener compositions (cheese substitutes A23C 20/00; preservation of milk substitutes A23B 11/20 ; butter substitutes A23D) [1,2006.01,2025.01]
C	A23C 11/02	• containing at least one non-milk component as source of fats or proteins (addition of non-milk fats or non-milk proteins in making cheese curd A23C 19/055; whey or whey preparations containing non-milk components as source of fats or proteins A23C 21/04) [3,2006.01,2025.01]

C	A23C 11/04	• • containing non-milk fats but no non-milk proteins (A23C 11/08, A23C 11/10 take precedence) [3,2006.01,2025.01]
C	A23C 11/06	• • containing non-milk proteins (A23C 11/08, A23C 11/10 take precedence) [3,2006.01,2025.01]
C	A23C 11/08	• • containing caseinates but no other milk proteins nor milk fats [3,2006.01,2025.01]
C	A23C 11/10	• • containing or not lactose but no other milk components as source of fats, carbohydrates or proteins [3,2006.01,2021.01,2025.01]
M	A23C 13/00	Cream; Cream preparations (<i>preservation of cream or cream preparations A23B 11/30</i> ; ice-cream A23G 9/00); Making thereof [1,2006.01]
D	A23C 13/08	(transferred to A23B 11/30)
D	A23C 13/10	(transferred to A23B 11/35)
M	A23C 15/00	Butter; Butter preparations; Making thereof (<i>preservation of butter or butter preparations A23B 11/40</i> ; butter substitutes A23D) [1,2006.01]
D	A23C 15/18	(transferred to A23B 11/40)
D	A23C 15/20	(transferred to A23B 11/45)
C	A23C 17/00	Buttermilk; Buttermilk preparations (milk preparations, milk powder or milk powder preparations in which the chemical composition of the milk is modified by non-chemical treatment A23C 9/14 ; <i>preservation of buttermilk or buttermilk preparations A23B 11/50</i>) [1,3,2006.01,2025.01]
C	A23C 17/02	• containing, or treated with, microorganisms or enzymes [3,2006.01,2025.01]
M	A23C 19/00	Cheese; Cheese preparations; Making thereof (cheese substitutes A23C 20/00 ; <i>preservation of cheese or cheese preparations A23B 11/60</i>) [1,2006.01]
M	A23C 19/05	• • Treating milk before coagulation; Separating whey from curd ← A23C 19/097 takes precedence → [3,2006.01]
M	A23C 19/06	• Treating cheese curd after whey separation; Products obtained thereby ← A23C 19/097 takes precedence → [3,2006.01]
M	A23C 19/09	• • Other cheese preparations; Mixtures of cheese with other foodstuffs ← preservation A23C 19/097 → [3,2006.01]
D	A23C 19/097	(transferred to A23B 11/60)
D	A23C 19/10	(transferred to A23B 11/65)
D	A23C 19/11	(transferred to A23B 11/67)
M	A23C 19/14	• Treating cheese after having reached its definite form, e.g. ripening, smoking ← preservation A23C 19/097 → [1,2006.01]
C	A23C 20/00	Cheese substitutes (A23C 19/055, A23C 19/093 take precedence; <i>preservation of cheese substitutes A23B 11/70</i>) [3,2006.01,2025.01]
C	A23C 20/02	• containing neither milk components, nor caseinate, nor lactose, as sources of fats, proteins or carbohydrates [3,2006.01,2021.01,2025.01]
C	A23C 21/00	Whey; Whey preparations (concentration, evaporation or drying A23C 1/00; <i>preservation of milk or milk preparations A23C 3/00</i> ; milk preparations, milk powder or milk powder preparations in which the chemical composition of the milk is modified by non-chemical treatment A23C 9/14 ; <i>preservation of whey or whey preparations A23B 11/80</i>) [1,3,2006.01,2025.01]
C	A23C 21/02	• containing, or treated with, microorganisms or enzymes [3,2006.01,2025.01]
C	A23C 21/04	• containing non-milk components as source of fats or proteins [3,2006.01,2025.01]
C	A23C 21/06	• Mixtures of whey with milk products or milk components [3,2006.01,2025.01]
C	A23C 21/08	• containing other organic additives, e.g. vegetable or animal products [3,2006.01,2025.01]
C	A23C 21/10	• containing inorganic additives [3,2006.01,2025.01]

M	A23D	EDIBLE OILS OR FATS, e.g. MARGARINES, SHORTENINGS ; OR COOKING OILS (obtaining, refining, preserving preservation thereof A23B 20/00 ; production, refinement or preservation of animal or vegetable fats or oils C11B, C11C ; hydrogenation C11C 3/12)
M	A23D 7/00	Edible oil or fat compositions containing an aqueous phase, e.g. margarines (preservation of edible oil compositions containing aqueous phase A23B 20/10) [5,2006.01]
D	A23D 7/06	(transferred to A23B 20/10)
M	A23D 9/00	Other edible oils or fats, e.g. shortenings ; or cooking oils (preservation of other edible oils A23B 20/30) [5,2006.01]
D	A23D 9/06	(transferred to A23B 20/30)
A23F		
C	A23F 3/00	Tea; Tea substitutes; Preparations thereof (preservation of tea, tea substitutes or herbal tea A23B 85/00) [1,2006.01,2025.01]
C	A23F 5/00	Coffee; Coffee substitutes; Preparations thereof (preservation of coffee or coffee substitutes A23B 90/00) [3,2006.01,2025.01]
C	A23F 5/14	• • using additives, e.g. milk ; or sugar ; Coating ; e.g. for preserving (flavouring A23F 5/46) [3,2006.01,2025.01]
A23G		
C	A23G 1/00	Cocoa; Cocoa products, e.g. chocolate; Substitutes therefor (preservation thereof A23B 80/00) [1,2006.01,2025.01]
M	A23L	FOODS, FOODSTUFFS ; OR NON-ALCOHOLIC BEVERAGES, NOT COVERED BY SUBCLASSES A21D OR A23B-A23J ; THEIR OTHERWISE PROVIDED FOR ; PREPARATION OR TREATMENT ; e.g. COOKING, MODIFICATION OF NUTRITIVE QUALITIES, PHYSICAL TREATMENT (shaping or working, not fully covered by this subclass, A23P) ; PRESERVATION OF FOODS OR FOODSTUFFS, IN GENERAL THEREOF (preservation thereof A23B) [4,2006.01]
M	A23L 2/00	Non-alcoholic beverages; Dry compositions or concentrates therefor (soup concentrates A23L 23/10); Their preparation Preparation or treatment thereof (preparation of non-alcoholic beverages by removal of alcohol C12H 3/00) [2,2006.01]
D	A23L 2/42	(transferred to A23B 70/00)
D	A23L 2/44	(transferred to A23B 70/10)
D	A23L 2/46	(transferred to A23B 70/30)
D	A23L 2/48	(transferred to A23B 70/35)
D	A23L 2/50	(transferred to A23B 70/50)
M	A23L 2/52	• Adding ingredients (adding preservatives A23L 2/44 A23B 70/10) [6,2006.01]
D	A23L 3/00	(transferred to A23B 2/00)
D	A23L 3/005	(transferred to A23B 2/05)
D	A23L 3/01	(transferred to A23B 2/08)
D	A23L 3/015	(transferred to A23B 2/10)
D	A23L 3/02	(transferred to A23B 2/20)
D	A23L 3/04	(transferred to A23B 2/22)
D	A23L 3/06	(transferred to A23B 2/25)
D	A23L 3/08	(transferred to A23B 2/28)
D	A23L 3/10	(transferred to A23B 2/30)
D	A23L 3/12	(transferred to A23B 2/33)
D	A23L 3/14	(transferred to A23B 2/37)
D	A23L 3/16	(transferred to A23B 2/40)
D	A23L 3/18	(transferred to A23B 2/42)
D	A23L 3/20	(transferred to A23B 2/44)
D	A23L 3/22	(transferred to A23B 2/46)
D	A23L 3/24	(transferred to A23B 2/48)
D	A23L 3/26	(transferred to A23B 2/50)
D	A23L 3/28	(transferred to A23B 2/53)

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D	A23L 3/30	(transferred to A23B 2/57)
D	A23L 3/32	(transferred to A23B 2/60)
D	A23L 3/34	(transferred to A23B 2/70)
D	A23L 3/3409	(transferred to A23B 2/704)
D	A23L 3/3418	(transferred to A23B 2/708)
D	A23L 3/3427	(transferred to A23B 2/712)
D	A23L 3/3436	(transferred to A23B 2/717)
D	A23L 3/3445	(transferred to A23B 2/721)
D	A23L 3/3454	(transferred to A23B 2/725)
D	A23L 3/3463	(transferred to A23B 2/729)
D	A23L 3/3472	(transferred to A23B 2/733)
D	A23L 3/3472	(transferred to A23B 2/733)
D	A23L 3/3481	(transferred to A23B 2/742)
D	A23L 3/349	(transferred to A23B 2/746)
D	A23L 3/3499	(transferred to A23B 2/75)
D	A23L 3/3508	(transferred to A23B 2/754)
D	A23L 3/3517	(transferred to A23B 2/758)
D	A23L 3/3526	(transferred to A23B 2/762)
D	A23L 3/3535	(transferred to A23B 2/767)
D	A23L 3/3544	(transferred to A23B 2/771)
D	A23L 3/3553	(transferred to A23B 2/775)
D	A23L 3/3562	(transferred to A23B 2/779)
D	A23L 3/3571	(transferred to A23B 2/783)
D	A23L 3/358	(transferred to A23B 2/788)
D	A23L 3/3589	(transferred to A23B 2/792)
D	A23L 3/3598	(transferred to A23B 2/796)
D	A23L 3/36	(transferred to A23B 2/80)
D	A23L 3/365	(transferred to A23B 2/82)
D	A23L 3/37	(transferred to A23B 2/85)
D	A23L 3/375	(transferred to A23B 2/88)
D	A23L 3/40	(transferred to A23B 2/90)
D	A23L 3/42	(transferred to A23B 2/91)
D	A23L 3/44	(transferred to A23B 2/92)
D	A23L 3/46	(transferred to A23B 2/93)
D	A23L 3/48	(transferred to A23B 2/94)
D	A23L 3/50	(transferred to A23B 2/95)
D	A23L 3/52	(transferred to A23B 2/96)
D	A23L 3/54	(transferred to A23B 2/97)
C	A23L 11/00	Pulses, i.e. fruits of leguminous plants, for production of food; Products from legumes; Preparation or treatment thereof (<i>preservation thereof A23B 75/00</i>) [2016.01,2021.01,2025.01]
C	A23L 11/60	• Drinks from legumes, e.g. lupine drinks [2021.01,2025.01]
C	A23L 11/65	• • Soy drinks [2021.01,2025.01]
M	A23L 29/00	Foods or foodstuffs containing additives (containing additives for modifying the nutritive qualities A23L 33/10; containing substantially indigestive additives, e.g. dietary fibres, A23L 33/21 ; <i>containing additives for preservation A23B</i>); Preparation or treatment thereof [2016.01]
M	A23L 35/00	Feed-<i>Food</i>s or foodstuffs not provided for in groups A23L 5/00-A23L 33/00; Preparation or treatment thereof (<i>preservation thereof A23B</i>) [2016.01]
M	A47C	CHAIRS- (seats specially adapted for vehicles B60N 2/00); SOFAS; BEDS- (upholstery in general B68G)
M	A47C 1/00	Chairs adapted for special purposes (features relating to vertical adjustability A47C 3/20 ; convertible chairs A47C 13/00 ; chairs or personal conveyances specially adapted for patients or disabled persons-A61G 3/00, e.g. <i>wheelchairs</i>, A61G 5/00; operating chairs ; <i>or</i> dental chairs A61G 15/00) [1,2006.01]

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M	A47C 1/02	• Reclining or easy chairs (supports for parts of body A47C 7/36 ; A47C 7/50 ; A47C 7/54) [1,2006.01]
M	A47C 1/08	• • with auxiliary seats (insertable seats for children A47C 1/11) [1,2006.01]
M	A47C 1/12	• Theatre, auditorium ; or similar chairs (<i>detachable</i> seats for <i>mounting on</i> stadium benches A47C 1/16) [1,2006.01]
M	A47C 1/16	• Seats detachably mounted on stadium benches (detachably mounted children's chairs A47D 1/10) [1,2006.01]
M	A47C 3/02	• Rocking chairs (specially for children A47D 13/10) [1,2006.01]
M	A47C 3/16	• of legless type, e.g. with seat directly resting on the floor (A47C 3/14 takes precedence; detachably mounted on stadium benches A47C 1/16 ; children's chairs mounted on back-rest of chair A47D 1/10); Hassocks; Pouffes [1,2006.01]
M	A47C 3/20	• Chairs or stools with vertically-adjustable seats (tables with variable height A47B 9/00) [1,2006.01]
M	A47C 4/00	Foldable, collapsible or dismountable chairs (of tubular metal type A47C 5/10 ; children's foldable chairs A47D 1/02) [1,2006.01]
M	A47C 4/06	• • Attachment of upholstery or fabric to frames (in general A47C 31/02) [1,2006.01]
M	A47C 4/30	• • Attachment of upholstery or fabric to frames (in general A47C 31/02) [1,2006.01]
M	A47C 4/52	• Trunk chairs, i.e. chairs collapsible to trunk shape (trunk tables A47B 3/10) [1,2006.01]
M	A47C 4/54	• Inflatable chairs (connection of valves to inflatable elastic bodies B60C 29/00) [1,2006.01]
M	A47C 5/04	• Metal chairs, e.g. tubular (of rocking type A47C 3/023 ; of non-tubular folding, collapsible, or dismountable type A47C 4/00 <i>rocking chairs having elastic frames made of tubular material A47C 3/023</i>) [1,2006.01]
M	A47C 7/00	Parts, details, or accessories of chairs or stools (attaching to floor A47B 91/08) [1,2006.01]
M	A47C 7/02	• Seat parts (adaptation of seats to mounting in tubular chairs A47C 5/06 ; such parts not restricted to chairs A47C 23/00 ; removable upholstered units or cushions A47C 27/00) [1,2006.01]
M	A47C 7/18	• • having foamed material included in cushioning part (foamed material mattresses A47C 27/14) [1,2006.01]
M	A47C 7/36	• Support <i>Supports</i> for the head or the back (for operating or dental chairs A61G 15/00) [1,2006.01]
M	A47C 7/50	• Supports for the feet or the legs (<i>reclining or easy chairs having</i> coupled to other adjustable <i>supporting</i> parts A47C 1/034 ; A47C 1/037 ; footstools A47C 16/02 <i>including a leg-rest or foot-rest A47C 1/034 ; reclining or easy chairs having coupled adjustable supporting parts including a head-rest in combination with a leg-rest or foot-rest A47C 1/037</i>) [1,2006.01]
M	A47C 7/58	• • Hinges, e.g. for mounting chairs in a curved row (hinges for wings in general E05D) [1,2006.01]
M	A47C 9/00	Stools for specified purposes (with rotatable seats A47C 3/18 ; with vertically adjustable seats A47C 3/20 ; step-stools A47C 12/00 ; footstools A47C 16/02 ; prayer stools A47C 16/04 ; platforms or seat-boxes specially adapted for angling A01K 97/22 ; walking sticks or umbrellas convertible into seats A45B 5/00) [1,5,2006.01]
M	A47C 11/00	Benches not otherwise provided for (school forms A47B 39/00) [1,2006.01]
M	A47C 15/00	Other seating furniture (school forms A47B 39/00) [1,2006.01]
M	A47C 16/00	Rests <i>Stand-alone rests</i> or supports for feet, legs, arms, back or head (associated with chairs A47C 7/00; associated with beds or sofas A47C 20/00) [2,2006.01]
M	A47C 16/04	• Prayer stools; Kneeling stools; Kneeling supports (hassocks or pouffes A47C 3/16) [2,2006.01]
M	A47C 17/00	Sofas; Couches; Beds (bedsteads A47C 19/00 ; spring mattresses A47C 23/00 ; divan-bases A47C 23/00 ; stuffed mattresses A47C 27/00 ; beds with special provisions for nursing A61G 7/00) [1,2006.01]
M	A47C 17/64	• Travelling or camp beds (<i>adjusting members for rests A47C 20/00 ; travelling or camp sacks or packs convertible into beds or mattresses A45F 4/06 ; stretchers A61G 1/00</i>) [1,2006.01]
M	A47C 17/86	• Parts or details <i>specially adapted</i> for beds, sofas or couches only not fully covered in a by any single one of the groups A47C 17/02 ; A47C 17/04 ; A47C 17/38 ; A47C 17/52 ; A47C 17/64 ; or A47C 17/84 <i>groups A47C 17/02-A47C 17/84</i> [1,2006.01]

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M	A47C 19/00	Bedsteads (spring mattresses with rigid frame or forming part of the bedstead A47C 23/00 ; for children's beds A47D 7/00 ; bed jointing members or fittings for bedsteads F16B) [1,2006.01]
M	A47C 19/12	• Folding bedsteads (travelling or camp beds A47C 17/64) [1,2006.01]
M	A47C 19/20	• Multi-stage bedsteads (multiple wall beds A47C 17/50; ; Bedsteads stackable to multi-stage bedsteads suspended beds A47C 17/84 [1,2006.01]
M	A47C 19/22	• Combinations of bedsteads with other furniture or with accessories, e.g. with bedside cabinets (bed tables A47B 23/00) [1,2006.01]
M	A47C 20/00	Head-, foot- or like rests for beds, sofas or the like (book-rests or bed tables A47B 23/00 ; bed-rests specially adapted for nursing A61G 7/065) [2,2006.01]
M	A47C 21/00	Attachments for beds, e.g. sheet holders , or bed-cover holders (bed tables supported on the bedstead A47B 23/02 ; for children's beds A47D 15/00) ; Ventilating, cooling or heating means in connection with bedsteads or mattresses [1,5,2006.01]
M	A47C 21/08	• Devices for prevention against falling-out, e.g. detachable side walls (for children's beds A47D 7/00) [1,2006.01]
M	A47C 23/30	• using combinations of springs covered by more than one of the groups A47C 23/02 ; A47C 23/04 ; A47C 23/06 and A47C 23/12 A47C 23/02-A47C 23/12 ; Frames therefor [1,2006.01]
M	A47C 27/045	• Attachment of spring inlays to coverings (upholstery attaching means A47C 31/02) ; Use of stiffening sheets, lattices or grids under spring inlays [2,2006.01]
M	A47C 27/08	• Fluid mattresses (connecting valves to inflatable elastic bodies B60C 29/00) [1,5,2006.01]
M	A47C 29/00	Nets for protection against insects in connection with chairs or beds (insect-nets for animals A01K 13/00; ; Bed canopies insect-nets as travelling equipment A45F 3/52 [1,2006.01]
M	A47C 31/02	• Upholstery attaching means (quilting, quilting means, fastening, fixing or finishing upholstery B68G 7/00) [1,2006.01]
M	A47C 31/12	• Means, e.g. measuring means, for adapting chairs, beds or mattresses to the shape or weight of persons (body measuring means for clothing manufacture A41H 1/00) [1,4,2006.01]
A47K		
M	A47K 10/24	• Towel dispensers; Toilet - paper dispensers (sheet or web dispensers in general B65H) [1,2006.01]
M	A61B	DIAGNOSIS; SURGERY; IDENTIFICATION (analysing biological material G01N , e.g. G01N 33/48 usefulness limited to only animals A61D)
D	A61B	Note(s) (deleted)
M	<u>A61B 1/00</u>	<u>Diagnosis; Psycho-physical tests</u>
M	A61B 1/00	Instruments for performing medical examinations of the interior of cavities or tubes of the body by visual or photographic inspection, e.g. endoscopes (examination of body cavities or body tracts using ultrasonic, sonic or infrasonic waves A61B 8/12; endoscopic instruments for taking cell samples or for biopsy A61B 10/04 ; for surgical purposes A61B 17/00 ; endoscopic surgical instruments A61B 17/94 ; surgical instruments using a laser beam being directed along or through a flexible conduit A61B 18/22); Illuminating arrangements therefor (for the eyes A61B 3/00) [1,4,2006.01]
M	A61B 1/12	• with cooling or rinsing arrangements (A61B 1/015 takes precedence) [1,6,2006.01]
M	A61B 1/24	• for the mouth, i.e. stomatoscopes, e.g. with tongue depressors (tongue depressors per se A61B 13/00) ; Instruments for opening or keeping open the mouth (combined with saliva removers A61C 17/10) [1,5,2006.01]
M	A61B 1/32	• Devices for opening or enlarging the visual field, e.g. of a tube of the body (dilators A61M 29/00) [1,2006.01]
M	A61B 5/02	• Measuring-Detecting, measuring or recording for evaluating the cardiovascular system, e.g. pulse, heart rate, blood pressure or blood flow ; Combined pulse/heart rate/blood pressure determination; Evaluating a cardiovascular condition not otherwise provided for, e.g. using combinations of techniques provided for in this group with electrocardiography; Heart catheters for measuring blood pressure [1,5,2006.01]
M	A61B 5/021	• Measuring pressure in heart or blood vessels (A61B 5/0205 takes precedence) [5,2006.01]

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M	A61B 5/024	<ul style="list-style-type: none"> • Measuring pulse rate or heart rate (A61B 5/0205 , A61B 5/021 take precedence) [5,2006.01]
M	A61B 5/05	<ul style="list-style-type: none"> • Detecting, measuring or recording for diagnosis by means of electric currents or magnetic fields; Measuring using microwaves or radio waves (impedance plethysmography A61B 5/0295 ; measuring movement of the entire body or parts thereof A61B 5/11; detecting, measuring or recording bioelectric or biomagnetic signals of the body or parts thereof A61B 5/24) [1,5,2006.01,2021.01]
M	A61B 5/06	<ul style="list-style-type: none"> • Devices, other than using radiation, for detecting or locating foreign bodies (for removing same A61B 17/50) [1,2006.01]
M	A61B 5/08	<ul style="list-style-type: none"> • Measuring devices for evaluating the respiratory organs (A61B 5/0205 takes precedence) [1,5,2006.01]
M	A61B 5/103	<ul style="list-style-type: none"> • Measuring devices for testing the shape, pattern, size or movement of the body or parts thereof, for diagnostic purposes (A61B 5/08 takes precedence; measuring instruments specially adapted for dentistry A61C 19/04) [5,2006.01]
M	A61B 5/11	<ul style="list-style-type: none"> • Measuring movement of the entire body or parts thereof, e.g. head or hand tremor or mobility of a limb (for measuring pulse A61B 5/02) [5,2006.01]
M	A61B 5/145	<ul style="list-style-type: none"> • Measuring characteristics of blood <u>in vivo</u>, e.g. gas concentration , or pH-value (measuring of blood pressure or blood flow A61B 5/02 ; non-radiation detecting or locating of foreign bodies in blood A61B 5/06) [7,2006.01]
M	A61B 5/1486	<ul style="list-style-type: none"> • • using enzyme electrodes, e.g. with immobilised oxidase [2006.01]
M	A61B 5/15	<ul style="list-style-type: none"> • Devices for taking samples of blood (hypodermic syringes A61M 5/178) [7,2006.01]
M	A61B 5/322	<ul style="list-style-type: none"> • • • • Physical templates or devices for measuring ECG waveforms, e.g. electrocardiograph rulers or calipers (by template matching A61B 5/35) [2021.01]
M	A61B 5/369	<ul style="list-style-type: none"> • • • Electroencephalography [EEG] (devices for psychotechnics A61B 5/16) [2021.01]
M	A61B 6/00	Apparatus or devices for radiation diagnosis; Apparatus or devices for radiation diagnosis combined with radiation therapy equipment (instruments measuring radiation intensity for application in the field of nuclear medicine, e.g. <u>in vivo</u> counting, G01T 1/161 ; apparatus for taking X-ray photographs G03B 42/02) [1,2006.01,2024.01]
M	A61B 6/03	<ul style="list-style-type: none"> • Computed tomography [CT] (echo tomography A61B 8/14) [4,2006.01]
M	A61B 6/04	<ul style="list-style-type: none"> • Positioning of patients; Tilttable beds or the like (operating tables A61G 13/00 ; operating chairs A61G 15/00) [1,2006.01]
M	A61B 7/04	<ul style="list-style-type: none"> • Electric stethoscopes (microphones, acoustic transducers therefor H04R) [1,2006.01]
M	A61B 8/08	<ul style="list-style-type: none"> • Detecting organic movements or changes, e.g. tumours, cysts, swellings (A61B 8/02 A61B 8/06 <i>Clinical applications</i> (A61B 8/02, A61B 8/04, A61B 8/06 take precedence) [4,2006.01]
M	A61B 8/12	<ul style="list-style-type: none"> • in body cavities or body tracts, e.g. by using catheters (catheters per se A61M 25/00) [4,2006.01]
M	A61B 8/13	<ul style="list-style-type: none"> • Tomography (A61B 8/10, A61B 8/12 take precedence; tomography for radiation diagnosis A61B 6/02) [5,2006.01]
D	A61B 10/00	Note(s) [5] (deleted)
M	A61B 10/00	<i>Instruments for taking body samples for diagnostic purposes (for taking samples of blood A61B 5/15);</i> Other methods or instruments for diagnosis, e.g. for vaccination diagnosis; Sex determination; Ovulation, sex determination or ovulation -period determination; Throat striking implements [1,4,2006.01]
M	A61B 10/02	<ul style="list-style-type: none"> • Instruments for taking cell samples or for biopsy (devices for taking samples of blood A61B 5/15) [2006.01]
M	A61B 10/04	<ul style="list-style-type: none"> • • Endoscopic instruments, <i>e.g. catheter-type instruments</i> [2006.01]
M	A61B 16/00	Devices specially adapted for vivisection or autopsy (similar devices for medical purposes, see the relevant groups for such devices) [1,2006.01]
M	A61B 17/00	Surgical instruments, devices or methods , e.g. tourniquets (A61B 18/00 takes precedence; contraceptive devices, pessaries or applicators therefor A61F 6/00 <i>dental tools A61C 3/00</i> ; eye surgery A61F 9/007; ear surgery A61F 11/20) [1,3,7,2006.01]
M	A61B 17/02	<ul style="list-style-type: none"> • for holding wounds open , <i>e.g. retractors</i>; Tractors [1,2006.01]

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M	A61B 17/03	• for closing wounds – or holding wounds closed – e.g. surgical staples ; Accessories for use therewith [6,2006.01]
M	A61B 17/06	• • • Needles; Holders or packages for needles or suture materials (puncturing needles A61B 17/34 ; hypodermic needles A61M 5/32) [1,3,2006.01]
M	A61B 17/072	• • • for applying a row of staples in a single action , <i>e.g. the staples being applied simultaneously</i> [5,2006.01]
M	A61B 17/115	• • • Staplers <i>for performing anastomosis, e.g. in a single operation</i> [5,2006.01]
M	A61B 17/122	• • Clamps or clips, <i>e.g. for the umbilical cord</i> [6,2006.01]
M	A61B 17/14	• Surgical saws (tooth-dental <i>saws for teeth</i> A61C 3/12) [1,2006.01]
M	A61B 17/16	• <i>Osteoclasis Instruments for performing osteoclasis</i> ; Drills or chisels for bones; Trepan [1,2006.01]
M	A61B 17/20	• for vaccinating or cleaning the skin previous to the vaccination (apparatus for injections A61M 3/00 ; A61M 5/00) [1,2006.01]
M	A61B 17/30	• Surgical pincettes (wound clamps A61B 17/08) , <i>i.e. surgical tweezers</i> [1,2006.01]
M	A61B 17/50	• Instruments – other than pincettes or toothpicks, – for removing foreign bodies from the human body (<i>surgical pincettes, i.e. surgical tweezers, A61B 17/30</i>) [1,2006.01]
M	A61B 17/58	• • for osteosynthesis, e.g. bone plates, screws or the like <i>setting implements</i> (A61B 17/14, A61B 17/16 take precedence) [4,6,2006.01]
M	A61B 17/70	• • • Spinal positioners or stabilisers , <i>e.g. stabilisers comprising fluid filler in an implant</i> [6,2006.01]
M	A61B 17/72	• • • Intramedullary devices, <i>e.g. pins or nails</i> [6,2006.01]
M	A61B 18/02	• by cooling, e.g. cryogenic techniques (devices for cooling specific reflex points of the body within cell life limits A61H 39/06) [7,2006.01]
M	A61B 18/04	• by heating (by applying electromagnetic radiation A61B 18/18 ; devices for heating specific reflex points of the body within cell life limits A61H 39/06) [7,2006.01]
M	A61B 18/18	• by applying electromagnetic radiation, e.g. microwaves (radiation therapy A61N 5/00) [7,2006.01]
M	A61B 90/00	Instruments, implements or accessories specially adapted for surgery or diagnosis and not covered by any of the groups A61B 1/00-A61B 50/00, e.g. for luxation treatment or for protecting wound edges (protective face masks A41D 13/11 ; surgeons' or patients' gowns or dresses A41D 13/12 ; devices for carrying off, for treatment of, or for carrying over, body liquids A61M 1/00) [2016.01]
M	A61B 90/60	• Supports for surgeons, e.g. chairs or hand supports (seats for dentists or surgeons associated with dental chairs or operating chairs A61G 15/00 <i>A61G 15/08</i>) [2016.01]
A61F		
M	A61F 2/00	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents (as cosmetic articles, see the relevant subclasses, e.g. wigs or hair pieces A41G 3/00 ; A41G 5/00 ; artificial nails A45D 31/00 ; dental prostheses A61C 13/00; materials for prostheses A61L 27/00 ; artificial kidneys A61M 1/14; artificial hearts A61M 60/00) [4,6,2006.01]
M	A61F 2/04	• • Hollow or tubular parts of organs, e.g. bladders, tracheae, bronchi or bile ducts (A61F 2/18, A61F 2/20 take precedence; devices, other than stent-grafts, providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents, A61F 2/82 ; instruments specially adapted for placement or removal of stents or stent-grafts A61F 2/95) [4,2006.01,2013.01]
M	A61F 2/14	• • Eye parts, e.g. lenses – or <i>corneal implants</i> (removable contact lenses G02G 7/04) ; Artificial eyes (making thereof from organic plastic material B29C ; B29D 11/02) [4,2006.01]
M	A61F 2/20	• • Larynxes; Tracheae combined with larynxes or for use therewith (tracheae, bronchi per se A61F 2/04) [4,2006.01]
M	A61F 2/28	• • Bones (joints A61F 2/30) [4,2006.01]
M	A61F 2/46	• • • Special tools for implanting artificial joints (surgical instruments A61B 17/00) [4,2006.01]
M	A61F 2/52	• • Mammary prostheses (brassières A41G 3/00 <i>brassieres with stiffening or bust-forming inserts A41C 3/10 , A41C 3/14</i>) [4,2006.01]

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M	A61F 2/82	• Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents (stent-grafts for tubular structures of the body other than blood vessels A61F 2/04; stent-grafts for blood vessels A61F 2/07; instruments specially adapted for placement or removal of stents or stent-grafts A61F 2/95 ; for closing wounds, or holding wounds closed A61B 17/03 ; dilators A61M 29/00) [2006.01,2013.01]
M	A61F 2/88	• • the wire-like elements formed as helical or spiral coils (forming a net-like or mesh-like structure A61F 2/90) [2006.01]
M	A61F 4/00	Methods or devices enabling patients or disabled persons to operate an apparatus or a device not forming part of the body (operating or control means for prostheses A61F 2/48 , A61F 2/68) [4,2006.01]
M	A61F 5/00	Orthopaedic methods or devices for non-surgical treatment of bones or joints (surgical instruments or methods for treatment of bones or joints, devices specially adapted therefor A61B 17/56) ; Nursing devices (bandages, dressings or absorbent pads A61F 13/00) [1,3,4,5,2006.01]
M	A61F 5/03	• • Corsets or bandages for abdomen, teat , or breast support, with or without pads (brassières A41G 3/00) [1,2006.01]
M	A61F 5/30	• • Pressure pads (corn-pads, corn-rings A61F 13/06) [1,2006.01]
M	A61F 5/34	• • • Pressure pads filled with air or liquid (valves specially adapted for medical use A61M 39/00) [1,2006.01]
M	A61F 5/41	• Devices for promoting penis erection (penis implants A61F 2/26 ; massage of the genitals A61H 19/00) [4,2006.01]
M	A61F 5/44	• Devices worn by the patient for reception of urine, faeces, catamenial or other discharge (absorbent pads, e.g. sanitary towels, A61F 13/15; drainage appliances for wounds A61M 27/00); Colostomy devices (adhesives for colostomy devices A61L 24/00 ; materials for colostomy devices A61L 28/00) [1,2006.01]
M	A61F 6/00	Contraceptive devices; Pessaries; Applicators therefor (chemical aspects of contraception A61K) [5,2006.01]
M	A61F 7/00	Heating or cooling appliances for medical or therapeutic treatment of the human body (heating or cooling means in connection with bedsteads or mattresses A47C 21/00 ; hyperthermia using electric or magnetic fields or ultrasound A61N) [1,5,2006.01]
M	A61F 7/08	• Warming pads, pans or mats (A61F 7/02 takes precedence) ; Hot-water bottles [1,3,2006.01]
M	A61F 9/06	• • Masks, shields , or hoods for welders (safety devices for welding in general F16P 1/00) [1,2006.01]
M	A61F 13/15	• Absorbent pads, e.g. sanitary towels, swabs or tampons for external or internal application to the body (non-absorbent catamenial receptacles A61F 5/44) ; Supporting or fastening means therefor; Tampon applicators [5,2006.01]
M	A61F 13/505	• • with separable parts, e.g. combination of disposable and reusable parts (A61F 13/20 takes precedence; supporting or fastening means A61F 13/56) [7,2006.01]
M	A61F 13/534	• • • having an inhomogeneous composition through the thickness of the pad (A61F 13/538, A61F 13/539 take precedence; homogeneous cores with tissue wrapping A61F 13/531) [7,2006.01]

A61H

M	A61H 31/00	Artificial respiration or heart by a force applied to the chest ; Heart stimulation, e.g. heart massage (artificial respiration by treatment with gas or air, e.g. mouth-to-mouth respiration, A61M 16/00 ; applying electric currents by contact electrodes for stimulation, e.g. heart pace-makers, A61N 1/36) [1,2006.01]
M	A61H 31/02	• "Iron - lungs", whether or not combined with gas-breathing means [1,2006.01]

A61K

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M A61K

Note(s) [1,7,2006.01]

1. This subclass covers the following subject matter, whether set forth as a composition (mixture), a process ~~of~~for preparing the composition or a process of ~~treating~~treatment using the composition:
 - a. Drug or other biological compositions which are capable of:
 - preventing, alleviating, treating or curing abnormal or pathological conditions of the living body by such means as destroying a parasitic organism, or limiting the effect of the disease or abnormality by chemically altering the physiology of the host or parasite (biocides A01N 25/00-A01N 65/00);
 - maintaining, increasing, decreasing, limiting ~~;~~or destroying a physiological body function, e.g. vitamin compositions, sex sterilants, fertility inhibitors, growth promoters ~~;~~or the like (sex sterilants for invertebrates, e.g. insects, A01N; plant growth regulators A01N 25/00-A01N 65/00);
 - diagnosing a physiological condition or state by an in vivo test, e.g. X-ray contrast or skin patch test compositions (measuring or testing processes involving enzymes or microorganisms C12Q; in vitro testing of biological material, e.g. blood ~~;~~or urine, G01N, e.g. G01N 33/48);
 - b. Body treating compositions generally intended for deodorising, protecting, adorning or grooming a body, e.g. cosmetics, dentifrices ~~;~~or tooth filling materials.
2. Attention is drawn to the definitions of groups of chemical elements following the title of section C.
3. Attention is drawn to the notes in class C07, for example the notes following the title of the subclass C07D, setting forth the rules for classifying organic compounds in that class, which rules are also applicable, if not otherwise indicated, to the classification of organic compounds in A61K.
4. In this subclass, with the exception of ~~group~~groups A61K 8/00 and A61K 40/00, 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.
5. Therapeutic activity of medicinal preparations is further classified in subclass A61P.

M A61K

Subclass index

DENTAL PREPARATIONS	A61K 6/00
COSMETICS, TOILETRY PREPARATIONS	A61K 8/00
MEDICINAL PREPARATIONS	
characterised by form	A61K 9/00
characterised by ingredients	
organic active ingredients	A61K 31/00,
	A61K 38/00
inorganic active ingredients	A61K 33/00
materials with undetermined constitution from animals, protozoa,	A61K 35/00
bacteria or viruses	
materials with undetermined constitution from algae, fungi,	A61K 36/00
lichens or plants	
containing antigens or antibodies	A61K 39/00
<u>containing cells for immunotherapy</u>	<u>A61K 40/00</u>
obtained by treating material with wave energy or particle	A61K 41/00,
radiation, containing radioactive substances	A61K 51/00
other active ingredients	A61K 45/00
non-active ingredients	A61K 47/00
Medicinal preparations with genetic material, gene therapy	A61K 48/00
for testing <u>in vivo</u>	A61K 49/00,
	A61K 50/00,
	A61K 51/00

C A61K 9/127

- • ~~Liposomes~~Synthetic bilayered vehicles, e.g. liposomes or liposomes with cholesterol as the only non-phosphatidyl surfactant [5,2006.01,2025.01]

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N	A61K 9/1271	• • • Non-conventional liposomes, e.g. PEGylated liposomes or liposomes coated or grafted with polymers (liposomes as conjugates A61K 47/69) [2025.01]
N	A61K 9/1272	• • • • comprising non-phosphatidyl surfactants as bilayer-forming substances, e.g. cationic lipids or non-phosphatidyl liposomes coated or grafted with polymers (lipids as modifying agents A61K 47/54) [2025.01]
N	A61K 9/1273	• • • • Polymersomes; Liposomes with polymerisable or polymerised bilayer-forming substances [2025.01]
N	A61K 9/1274	• • • Non-vesicle bilayer structures, e.g. liquid crystals, tubules, cubic phases or cochleates; Sponge phases [2025.01]
N	A61K 9/1275	• • • Lipoproteins or protein-free species thereof, e.g. chylomicrons; Artificial high-density lipoproteins [HDL], low-density lipoproteins [LDL] or very-low-density lipoproteins [VLDL]; Precursors thereof [2025.01]
N	A61K 9/1276	• • • Globules of milk; Constituents thereof [2025.01]
N	A61K 9/1277	• • • Preparation processes; Proliposomes [2025.01]
N	A61K 9/1278	• • • • Post-loading, e.g. by ion or pH gradient [2025.01]
D	A61K 9/133	(transferred to A61K 9/127-A61K 9/1273, A61K 9/1277-A61K 9/1278)
C	A61K 35/15	• • • Cells of the myeloid line, e.g. granulocytes, basophils, eosinophils, neutrophils, leucocytes, monocytes, macrophages or mast cells; Myeloid precursor cells; Antigen-presenting cells, e.g. dendritic cells (presenting a specific antigen A61K 39/00 ; therapeutic combinations of antibodies, or fragments thereof, and blood-derived cells A61K 39/00 ; cellular immunotherapy A61K 40/00) [2015.01,2025.01]
C	A61K 35/17	• • • Lymphocytes; B-cells; T-cells; Natural killer cells; Interferon-activated or cytokine-activated lymphocytes (when activated by a specific antigen A61K 39/00 cellular immunotherapy A61K 40/00) [2015.01,2025.01]
N	A61K 40/00	Note(s) [2025.01] <ol style="list-style-type: none"> 1. This group <u>covers</u> isolated cells of the immune system presenting or targeting a specific antigen or a mix of antigens for use in therapy. 2. In this main group, the last place priority rule is not applied, i.e. the common rule is applied.
N	A61K 40/00	Cellular immunotherapy (medicinal preparations containing antigens or antibodies A61K 39/00) [2025.01]
N	A61K 40/10	• characterised by the cell type used [2025.01]
N	A61K 40/11	• • T-cells, e.g. tumour infiltrating lymphocytes [TIL] or regulatory T [Treg] cells; Lymphokine-activated killer [LAK] cells [2025.01]
N	A61K 40/13	• • B-cells [2025.01]
N	A61K 40/15	• • Natural-killer [NK] cells; Natural-killer T [NKT] cells [2025.01]
N	A61K 40/17	• • Monocytes; Macrophages [2025.01]
N	A61K 40/19	• • Dendritic cells [2025.01]
N	A61K 40/20	• characterised by the effect or the function of the cells [2025.01]
N	A61K 40/22	• • Immunosuppressive or immunotolerising [2025.01]
N	A61K 40/24	• • Antigen-presenting cells [APC] [2025.01]
N	A61K 40/30	• characterised by the recombinant expression of specific molecules in the cells of the immune system [2025.01]
N	A61K 40/31	• • Chimeric antigen receptors [CAR] [2025.01]
N	A61K 40/32	• • T-cell receptors [TCR] [2025.01]
N	A61K 40/33	• • Antibodies; T-cell engagers [2025.01]
N	A61K 40/34	• • Antigenic peptides [2025.01]
N	A61K 40/35	• • Cytokines [2025.01]
N	A61K 40/36	• • Immune checkpoint inhibitors [2025.01]
N	A61K 40/40	• characterised by antigens that are targeted or presented by cells of the immune system [2025.01]
N	A61K 40/41	• • Vertebrate antigens [2025.01]
N	A61K 40/42	• • • Cancer antigens [2025.01]
N	A61K 40/43	• • Protozoan antigens [2025.01]
N	A61K 40/44	• • Fungal antigens [2025.01]

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N	A61K 40/45	• • Bacterial antigens [2025.01]
N	A61K 40/46	• • Viral antigens [2025.01]
N	A61K 40/48	• • Allergens [2025.01]
N	A61K 40/50	• characterised by the use of allogeneic cells [2025.01]

A61M

M	A61M 16/00	Devices for influencing the respiratory system of patients by gas treatment, e.g. mouth-to-mouth respiration ; Tracheal tubes (stimulating the respiratory movement by mechanical, pneumatic or electrical means, iron lungs combined with gas breathing means A61H 31/00) ventilators (iron lungs A61H 31/02) ; Tracheal tubes [1,4,2006.01]
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B01J

M	B01J 20/00	Note(s) [2,5] <ol style="list-style-type: none"> 1. In groups B01J 20/00-B01J 31/00, metal salts having an anion composed of metal and oxygen only, e.g. molybdates, are considered as chemically bound mixtures of the component metal oxides. 2. Attention is drawn to the definitions of groups of chemical elements following the title of section C. 3. In groups B01J 20/00-B01J 31/00, 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. 4. Pure compounds or elements, or their recovery from solid sorbent compositions, filter aid compositions, or catalysts, are classified in the appropriate subclass for chemical compounds or elements. However, when it is explicitly stated that the pure compound or element, in a particular form, is especially useful as a solid sorbent, filter aid, or catalyst, it is further classified in group B01J 20/00 or B01J 35/00.
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M	B08B	CLEANING IN GENERAL; PREVENTION OF FOULING IN GENERAL (brushes A46 ; devices for domestic or like cleaning A47L ; separation of particles from liquids or gases B01D ; separation of solids B03 ; B07 ; spraying or applying liquids or other fluent materials to surfaces in general B05 ; cleaning devices for conveyors B65G 45/10 ; concurrent cleaning, filling and closing of bottles B67C 7/00 ; inhibiting corrosion or incrustation in general C23 ; cleaning streets, permanent ways, beaches or land E01H ; parts, details or accessories of swimming or splash baths or pools, specially adapted for cleaning E04H 4/16 ; preventing or removing electrostatic charges H05F)
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M	B08B	Note(s) the surroundings of a surface to be cleaned or kept clean, e.g. water in a boiler C02F, air in a room F24F
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This subclass ~~covers~~ only cleaning, which is usually classified according to one (or more) of the aspects mentioned below, if it is not fully classifiable in a subclass providing for any of the following aspects:

does not cover cleaning specially adapted for articles, substances, devices or surroundings provided that its cleaning aspects are fully classifiable in the relevant application place.

Otherwise, classification is made in the most appropriate place in this subclass.

M	B08B 3/08	• • the liquid having chemical or dissolving effect (substances used, see the relevant classes) [1,2006.01]
M	B08B 3/12	• • • by sonic or ultrasonic vibrations (washing or rinsing machines for crockery or tableware using sonic or ultrasonic waves A47L 15/13 ; of natural teeth, of prostheses using ultrasonic techniques similar to those used for natural teeth A61G 17/20 ; application of ultrasonic vibrations to chemical, physical or physico-chemical processes in general B01J 19/10) [2,5,2006.01]
M	B08B 3/14	• • • Removing waste, e.g. labels, from cleaning liquid (treatment of water in general C02F ; [5,2006.01]
M	B08B 5/00	Cleaning by methods involving the use of air flow or gas flow (B08B 6/00 ; B08B 9/00 take precedence <i>cleaning hollow articles by methods or apparatus specially adapted thereto B08B 9/00</i>) [1,2,7,2006.01]
M	B08B 5/04	• Cleaning by suction, with or without auxiliary action (suction cleaners A47L) [1,2006.01]

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M	B08B 6/00	Cleaning by electrostatic means (domestic cleaning implements functioning electrostatically A47L 13/40 ; cleaning of grooved record carriers G11B 3/58) [2,2006.01]
M	B08B 9/00	Cleaning hollow articles by methods or apparatus specially adapted thereto (B08B 6/00 takes precedence) [1,2,2006.01]
L	B08B 9/02	• Cleaning pipes or tubes or systems of pipes or tubes (apparatus for cleaning metal pipes by chemical methods C23G 3/04) [1,5,2006.01]
M	B08B 11/00	Cleaning flexible or delicate articles by methods or apparatus specially adapted thereto (B08B 3/12 , B08B 6/00 take precedence) [1,2,2006.01]
M	B08B 11/04	• specially adapted for plate glass, e.g. prior to manufacture of windshields (cleaning the gap between permanently secured panes E06B 3/677) [1,2006.01]
M	B08B 15/00	Preventing escape of dirt or fumes from the area where they are produced; Collecting or removing dirt or fumes from that area (parts, details or accessories of cooking-vessels for withdrawing or condensing cooking vapours from such vessels A47J 36/38 ; refuse disposal B65F ; devices for conducting smoke or fumes, e.g. flues, F23J 11/00 ; removing cooking fumes from domestic stoves or ranges F24C 15/20 ; air-conditioning, ventilation F24F) [1,5,2006.01]
B21D		
M	B21D 37/00	Tools as parts of machines covered by this subclass (forms or constructions of tools uniquely adapted for particular operations, see in the relevant groups for the operations) [1,2006.01]
M	B21D 43/00	Feeding, positioning or storing devices combined with, or arranged in, or specially adapted for use in connection with, apparatus for working or processing sheet metal, metal tubes or metal profiles; Associations therewith of cutting devices (cutting devices associated with the tool, see the relevant group for the tool) [1,2006.01]
B21J		
M	B21J 7/00	Hammers; Forging machines with hammers or die jaws acting by impact (hand hammers B25D; electrical features section H) [1,2006.01]
B23K		
C	B23K 37/00	<i>Auxiliary devices or processes, not specially adapted to for a procedure covered by only one of the other main groups of this subclass (eye-shields for welders worn on the operator's body or carried in the hand A61F 9/00; applicable to metal-working machines other than soldering, welding, or flame-cutting machines B23Q; other protective shields F16P 1/06) [1,2006.01,2025.01]</i>
N	B23K 37/003	• Cooling means for welding or cutting [2025.01]
N	B23K 37/006	• Safety devices for welding or cutting [2025.01]
C	B23K 37/053	•• aligning cylindrical work; Clamping devices therefor [5,2006.01,2025.01]
N	B23K 37/0531	••• Internal pipe alignment clamps [2025.01]
N	B23K 37/0533	••• External pipe alignment clamps [2025.01]
N	B23K 37/0535	••• Longitudinal pipe seam alignment clamps [2025.01]
N	B23K 37/0536	••• for maintaining flanges on tubes [2025.01]
N	B23K 37/0538	••• for rotating tubes, e.g. rollers [2025.01]
B23Q		
M	B23Q 11/10	• Arrangements for cooling or lubricating tools or work (incorporated in tools, see the relevant subclass for the tool) [1,2006.01]
B27B		
M	B27B 1/00	Methods for subdividing trunks or logs essentially involving sawing (features of machines used, see the relevant groups for the machines) [1,2006.01]
M	B27B 29/00	Gripping, clamping , or holding devices for the trunk or log in saw mills or sawing machines (safety guards or devices specially designed for wood saws B27G 19/00 ; for other timber, see the relevant groups for the machines); Travelling trunk or log carriages [1,2006.01]
B60K		

M	B60K 1/00	Arrangement or mounting of electrical propulsion units (B60K 7/00 takes precedence; arrangement or mounting of plural diverse prime-movers for mutual or common propulsion B60K 6/00 ; electric transmission arrangements B60K 17/12 ; electric equipment or propulsion of electrically propelled vehicles per se B60L ; current collectors for power supply lines of electrically propelled vehicles B60L 5/00) [1,5,2006.01]
M	B60K 1/04	• of the electric storage means for propulsion { exchanging batteries for electric propulsion of vehicles B60L 53/80 ; for auxiliary purposes only B60R 16/04 ; supplying batteries to, or removing batteries from, vehicles B60S 5/06 } [1,6,2006.01,2019.01]
M	B60K 3/00	Arrangement or mounting of steam or gaseous-pressure propulsion units (B60K 7/00 takes precedence; arrangement or mounting of plural diverse prime-movers for mutual or common propulsion B60K 6/00 ; gaseous-pressure transmission arrangements B60K 17/10) [1,5,2006.01]
M	B60K 7/00	Disposition of motor in, or adjacent to, traction wheel { roller-skate driving mechanisms A63C 17/12 } [1,2006.01]
M	B60K 11/00	Arrangement in connection with cooling of propulsion units { heating the interior space B60H ; cooling internal combustion engines per se F01P } [1,2006.01]
M	B60K 13/00	Arrangement in connection with combustion air intake or gas exhaust of propulsion units { extensions for melting snow or ice on roads or like surfaces E01H 5/00 ; E01H 6/00 ; forming part of the engine F01N ; supplying combustion engines with combustible mixtures or constituents F02M } [1,2006.01]
M	B60K 13/04	• concerning exhaust { exhaust silencers for internal combustion engines per se F01N } [1,2006.01]
M	B60K 15/00	Arrangement in connection with fuel supply of combustion engines; Mounting or construction of fuel tanks { tanks in general B65D ; F17C ; supplying combustion engines with combustible mixtures or constituents F02M } [1,5,2006.01]
M	B60K 15/01	• Arrangement of fuel conduits { chassis frame forming fluid conduit means B62D 21/17 } [5,2006.01]
M	B60K 15/03	• Fuel tanks { chassis frame comprising fluid storage compartment B62D 21/16 } [5,2006.01]
M	B60K 15/10	• concerning gas-producing plants { gas-producing plants per se C10J } [1,2006.01]
M	B60K 16/00	Arrangements in connection with power supply of propulsion units in vehicles from forces of nature, e.g. sun or wind (electric propulsion with power supply from forces of nature, e.g. sun or wind, B60L 8/00; marine propulsion by wind motors driving water-engaging propulsive elements B63H 13/00 ; wind motors specially adapted for installation on vehicles F03D 9/32) [5,2006.01,2020.01]
M	B60K 17/00	Arrangement or mounting of transmissions in vehicles { torque-transmitting axles B60B 35/12 ; combined transmission and steering gear for steering non-deflectable wheels B62D 11/00 ; clutches per se ; e.g. construction thereof, F16D ; gearing per se ; e.g. construction thereof, F16H } [1,2,2006.01]
M	B60K 17/04	• characterised by arrangement, location ; or kind of gearing { electric equipment or propulsion of electrically propelled vehicles B60L } [1,2006.01]
M	B60K 17/10	• • of fluid gearing { of fluid clutches B60K 17/02 } [1,2006.01]
M	B60K 17/12	• • of electric gearing { of electrically actuated clutches B60K 17/02 } [1,2006.01]
M	B60K 17/14	• • the motor of fluid or electric gearing being disposed in, or adjacent to, traction wheel { B60K 7/00 ; B60K 17/356 take precedence } [1,4,2006.01]
M	B60K 17/34	• for driving both front and rear wheels, e.g. four wheel drive vehicles { arrangement or mounting of control devices for changing number of driven wheels B60K 23/08 } [1,2006.01]
M	B60K 17/35	• • including arrangements for suppressing or influencing the power transfer, e.g. viscous clutches { differential gearing with locking devices F16H 48/20 } [4,6,2006.01]
M	B60K 17/356	• • having fluid or electric motor, for driving one or more wheels { disposition of motor in, or adjacent to, traction wheel B60K 7/00 } [4,2006.01]
M	B60K 20/00	Arrangement or mounting of change-speed gearing control devices in vehicles { movable cabs having special adaptations of vehicle control devices B62D 33/073 ; such control devices per se F16H } [2,5,2006.01]
M	B60K 20/02	• of initiating means { control mechanisms in general G05G } [2,2006.01]

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M	B60K 23/00	Arrangement or mounting of control devices for vehicle transmissions, or parts thereof, not otherwise provided for (combined transmission and steering gear for steering non-deflectable wheels B62D 11/00 ; movable cabs having special adaptations of vehicle control devices B62D 33/073 ; such control devices per se F16D ; F16H) [1,2,5,2006.01]
M	B60K 25/00	Auxiliary drives (B60K 16/00 takes precedence ; arrangement of tyre-inflating pumps mounted on vehicles B60C 23/10 ; driving engine auxiliaries F02B) [1,5,2006.01]
M	B60K 25/06	• from the transmission power take-off (transmissions having power take-off B60K 17/28) [1,2006.01]
M	B60K 25/10	• directly from oscillating movements due to vehicle running motion, e.g. suspension movement (resilient suspensions having dampers accumulating utilisable energy, e.g. compressing air, B60G 13/14) [1,5,2006.01]
M	B60K 26/00	Arrangement or mounting of propulsion-unit control devices in vehicles (movable cabs having special adaptations of vehicle control devices B62D 33/073) [2,5,2006.01]
M	B60K 28/00	Safety devices for propulsion-unit control, specially adapted for, or arranged in, vehicles, e.g. preventing fuel supply or ignition in the event of potentially dangerous conditions (for electric safety devices on electrically-propelled vehicles B60L 3/00 ; road vehicle drive control systems for purposes not related to the control of a particular sub-unit B60W 30/00 ; drive control systems specially adapted for autonomous road vehicles B60W 60/00) [2,2006.01]
M	B60K 28/16	• responsive to, or preventing, spinning or skidding of wheels (brake control systems for vehicle drive stability B60T 8/1755 ; arrangements responsive to a speed condition for adjusting wheel braking force B60T 8/32 ; control of vehicle driving stability otherwise than by controlling the propulsion unit only B60W 30/02 ; preventing wheel slippage by reducing power in rail vehicles B61G 15/12) [4,2006.01]
M	B60K 31/00	Vehicle fittings, acting on a single sub-unit only, for automatically controlling vehicle speed, i.e. preventing speed from exceeding an arbitrarily established velocity or maintaining speed at a particular velocity, as selected by the vehicle operator (fittings acting on two or more sub-units B60W 30/14 ; propulsion-unit control in general, see the relevant classes or subclasses, e.g. F02D ; speedometers G01P ; systems or devices for controlling speed in general G05D 13/00) [1,2,2006.01]
B62K		
N	B62K 19/00	Note(s) [2025.01] Cycle frames specially adapted for one particular kind of cycle specified in groups B62K 1/00-B62K 17/00, see the relevant group.
M	B62K 19/00	Cycle frames (cycle frames specially adapted for one particular kind of cycle specified in groups B62K 1/00-B62K 17/00 , see the relevant group) [1,2006.01]
N	B62K 21/00	Note(s) [2025.01] Steering devices specially adapted for one particular kind of cycle specified in groups B62K 1/00-B62K 17/00, see the relevant group.
M	B62K 21/00	Steering devices (steering devices specially adapted for one particular kind of cycle specified in groups B62K 1/00-B62K 17/00 , see the relevant group) [1,2006.01]
B64D		
M	B64D 1/00	Dropping, ejecting, releasing , or receiving articles, liquids, or the like, in flight (with respect to weapon sights , or aiming F41G takes precedence ; parachutes B64D 17/00 ; ejectable seats B64D 25/10 ; ejectable capsules B64D 25/12 ; refuelling during flight B64D 39/00 ; launching apparatus for projecting projectiles or missiles F41F 1/00, F41F 7/00 ; rocket or torpedo launchers F41F 3/00) [1,2006.01]
M	B64D 1/04	• the articles being explosive, e.g. bombs (arming or setting bomb fuzes F42G) [1,2006.01]
M	B64D 1/18	• by spraying, e.g. insecticides (spraying apparatus in general B05B) [1,2006.01]
M	B64D 3/00	Aircraft adaptations to facilitate towing or being towed (B64D 39/00 takes precedence) [1,2006.01]
M	B64D 3/02	• for towing targets (towed targets per se F41J) [1,2006.01]
M	B64D 5/00	Aircraft transported by aircraft, e.g. for release or reberthing during flight (flying units formed by separate aircraft B64C 37/02) [1,2006.01]

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M	B64D 7/00	Arrangement of military equipment, e.g. armaments, armament accessories ; or military shielding, in aircraft; Adaptations of armament mountings for aircraft (dropping bombs or the like B64D 1/00 ; armaments or mountings therefor per se F41) [1,2006.01]
M	B64D 7/08	• Arrangement of rocket launchers (rocket launchers per se ; e.g. rocket pods, F41F 3/06) [1,2006.01]
M	B64D 9/00	Equipment for handling freight; Equipment for facilitating passenger embarkation or the like (emergency equipment B64D 17/00 ; B64D 19/00 ; B64D 25/00 ; structures integral with fuselage to facilitate loading, fuselage floors specially adapted for freight, steps mounted on, and retractable within, aircraft B64C ; ground installations B64F) [1,2006.01]
M	B64D 10/00	Flight suits (helmets in general A42B 3/00 ; breathing helmets A62B 18/00) [3,2006.01]
M	B64D 11/02	• Toilet fittings (of general application A47K) [1,2006.01]
M	B64D 13/00	Arrangements or adaptations of air-treatment apparatus for aircraft crew or passengers, or freight space (treatment rooms with artificial climate for medical purposes A61G 10/02 ; respiratory apparatus in general A62B ; for vehicles in general B60H) [1,2006.01]
M	B64D 15/00	De-icing or preventing icing on exterior surfaces of aircraft (motor vehicles specially adapted for carrying de-icing equipment B60P) [1,2006.01]
M	B64D 15/06	• Liquid application (in general B05) [1,2006.01]
M	B64D 15/12	• by electric heating (H05B 3/84 takes precedence; electric heating elements in general H05B heating arrangements specially adapted for transparent or reflecting areas H05B 3/84) [1,5,2006.01]
M	B64D 17/72	• by explosive or inflatable means (connection of valves to inflatable elastic bodies B60C 29/00) [1,2006.01]
M	B64D 25/00	Emergency apparatus or devices, not otherwise provided for (parachutes B64D 17/00 ; B64D 19/00 ; jettisoning of fuel tanks or fuel B64D 37/00 ; safety belts or body harnesses in general A62B 35/00 ; safety belts or body harnesses for land vehicles B60R 22/00 ; severable or jettisonable parts of fuselage facilitating emergency escape B64C) [1,4,2006.01]
M	B64D 25/08	• Ejecting or escaping means (escape apertures B64C) [1,2006.01]
M	B64D 25/102	• • Propelling means, e.g. by a combination of catapult and rocket means (B64D 25/11 ; B64D 25/112 take precedence) [5,2006.01]
M	B64D 25/14	• • Inflatable escape chutes (connection of valves to inflatable elastic bodies B60C 29/00) [1,2006.01]
M	B64D 25/18	• • Flotation gear (aircraft alighting gear B64C) [1,2006.01]
M	B64D 27/02	• Aircraft characterised by the type or position of power plants (fuselages specially adapted for mounting power plants B64C 1/16 ; wings specially adapted for power plants B64C 3/32) [1,2006.01]
M	B64D 29/00	Power-plant nacelles, fairings ; or cowlings (nacelles not otherwise provided for B64C) [1,2006.01]
M	B64D 29/02	• associated with wings (wings adapted for mounting power plant B64C) [1,2006.01]
M	B64D 33/02	• of combustion air intakes (air intakes for gas turbine plants or jet propulsion plants per se F02C 7/04 ; air intakes for combustion engines in general F02M 35/00) [1,2006.01]
M	B64D 33/04	• of exhaust outlets or jet pipes (exhaust outlets for combustion engines in general F01N ; jet pipes or nozzles for jet propulsion plants per se F02K ; plants characterised by the form or arrangement of the jet pipe or nozzle F02K) [1,3,2006.01]
M	B64D 33/08	• of power plant cooling systems (cooling of internal combustion engines per se F01P ; cooling of gas turbine plants or jet propulsion plants per se F02C ; F02K) [1,2006.01]
T	B64D 35/022	• • • of hybrid-electric type [2024.01,2025.01]
T	B64D 35/023	• • • • of series-parallel type [2024.01,2025.01]
T	B64D 35/024	• • • • of series type [2024.01,2025.01]
T	B64D 35/025	• • • • of parallel type [2024.01,2025.01]
T	B64D 35/026	• • • the electric power plant being integral with the propeller or rotor [2024.01,2025.01]
C	B64D 35/08	• characterised by the transmission being driven by a plurality of power plants (for hybrid-electric power plants B64D 35/022) [1,2006.01,2025.01]
M	B64D 37/02	• Tanks (tanks constructed integrally with aircraft wings B64C ; tanks in general B65D B64C 3/34) [1,2006.01]

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M	B64D 37/14	• • Filling or emptying (transferring fuels to adjust aircraft trim B64G B64C 17/10) [1,2006.01]
M	B64D 37/16	• • • Filling systems (ground installations for fuelling aircraft B64F B64F 1/28) [1,2006.01]
M	B64D 37/32	• Safety measures not otherwise provided for, e.g. preventing explosive conditions (extinguishing or preventing fires in aircraft A62G) [1,2006.01]
M	B64D 39/00	Refuelling during flight (filling or emptying fuel tanks B64D 37/14) [1,2006.01]
M	B64D 39/04	• Adaptations of hose construction (pipes in general F16L) [1,2006.01]
M	B64D 43/00	Arrangements or adaptations of instruments (arrangements of cameras B64D 47/08 ; aeronautical measuring instruments per se G01C) [1,2006.01]
M	B64D 45/00	Aircraft indicators or protectors not otherwise provided for (camouflage F41H 3/00) [1,2006.01]
M	B64D 45/02	• Lightning protectors (lightning arrestors H01C 7/12 ; H01C 8/04 ; H01G 9/18 ; H01T ;) ; Static dischargers (in general H05F 3/00) circuit arrangements therefor H02H [1,2006.01]
B64F		
M	B64F 1/00	Ground or aircraft-carrier-deck installations (specially adapted for captive aircraft B64F 3/00) [1,2006.01,2024.01]
B65D		
M	B65D 1/00	Rigid or semi-rigid containers having bodies formed in one piece, e.g. by casting metallic material, by moulding plastics, by blowing vitreous material, by throwing ceramic material, by moulding pulped fibrous material or by deep-drawing operations performed on sheet material (with curved or partially-curved cross-section made by winding or bending or folding paper B65D 3/00 or with polygonal cross-section formed by folding B65D 5/00; specially constructed to be opened by cutting, piercing or tearing of wall portions B65D 17/00; rigid pallets with side walls B65D 19/02) [1,5,2006.01]
M	B65D 1/08	• • adapted to discharge drops (droppers B65D 47/18) [1,2006.01]
M	B65D 1/09	• Ampoules (specially adapted for medical or pharmaceutical purposes A61J 1/06) [5,2006.01]
M	B65D 1/32	• Containers adapted to be temporarily deformed by external pressure to expel contents (means F16N 3/00) [1,2006.01]
M	B65D 5/02	• by folding or erecting a single blank to form a tubular body with or without subsequent folding operations, or the addition of separate elements, to close the ends of the body (B65D 5/36 takes precedence specially constructed to allow collapsing and re-erecting without disengagement of side or bottom connections B65D 5/36) [1,2006.01]
M	B65D 5/16	• • the tubular body being formed with an aperture or removable portion arranged to allow removal or insertion of contents through one or more sides (contents dispensing means B65D 5/72) [1,2006.01]
M	B65D 5/18	• by folding a single blank to U-shape to form the base of the container and opposite sides of the body portion, the remaining sides being formed primarily by extensions of one or more of these opposite sides, e.g. flaps hinged thereto (B65D 5/36 takes precedence specially constructed to allow collapsing and re-erecting without disengagement of side or bottom connections B65D 5/36) [1,2006.01]
M	B65D 5/20	• by folding-up portions connected to a central panel from all sides to form a container body, e.g. of tray-like form (B65D 5/36 takes precedence specially constructed to allow collapsing and re-erecting without disengagement of side or bottom connections B65D 5/36) [1,2006.01]
M	B65D 5/32	• having bodies formed by folding and interconnecting two or more blanks (B65D 5/36 takes precedence specially constructed to allow collapsing and re-erecting without disengagement of side or bottom connections B65D 5/36) [1,2006.01]
M	B65D 5/50	• • • Internal supporting or protecting elements for contents (elements formed by inward-folding of a wall extending from, and continuously around, an end of a tubular body B65D 5/06 ; partitions B65D 5/48) [1,2006.01]
M	B65D 5/63	• • having two or more separate access openings (contents dispensing means B65D 5/72) [6,2006.01]

M	B65D 8/00	Containers having a curved cross-section formed by interconnecting or uniting two or more rigid, or substantially rigid, components made wholly or mainly of metal, plastics, wood or substitutes therefor (specially constructed to be opened by cutting, piercing or tearing of wall portions B65D 17/00 rigid pallets with side walls B65D 19/02) [3,2006.01]
M	B65D 13/00	Containers having bodies formed by interconnecting two or more rigid, or substantially rigid, components made wholly or mainly of the same material, other than metal, plastics, wood or substitutes therefor (rigid pallets with side walls B65D 19/02) [1,4,2006.01]
M	B65D 17/36	• • • adapted for engagement with opening tools, e.g. slotted keys (attachment of opening tools, e.g. slotted keys, to containers B65D 17/52) [3,2006.01]
M	B65D 17/50	• Non-integral frangible members applied to, or inserted in, preformed openings, e.g. tearable strips or plastic plugs (B65D 53/08 takes precedence flexible adhesive strips adapted to seal filling or discharging apertures B65D 53/08) [3,2006.01]
M	B65D 19/00	Pallets or like platforms, with or without side walls, for supporting loads to be lifted or lowered (in devices for lifting or lowering bulky or heavy goods for loading or unloading purposes B66F 9/12) [1,2006.01]
M	B65D 23/00	Details of bottles or jars not otherwise provided for (screw-threaded or bayonet connections between stoppers or caps and containers B65D 39/08, B65D 41/04, B65D 41/34; closure-securing elements B65D 45/00) [1,2006.01]
M	B65D 25/34	• Coverings or external coatings (of containers made by folding or erecting blanks made of paper B65D 5/62; covering or external coating for bottles or jars not otherwise provided for B65D 23/08; wrappers B65D 65/00) [1,2006.01]
M	B65D 27/00	Envelopes or like essentially-rectangular flexible containers for postal or other purposes having no structural provision for thickness of contents (with shock-absorbing properties B65D 81/03 letter-cards B42D 15/00) [1,2006.01]
M	B65D 27/12	• Closures (separate fasteners B42F 1/00) [1,2006.01]
M	B65D 33/16	• End- or aperture-closing arrangements or devices (valves of valve bags B65D 30/24; removable stoppers or caps B65D 39/00, B65D 41/00; closures of filled bags B65D 77/10; closing filled bags in association with packaging B65B 7/00, B65B 51/00) [1,2006.01]
M	B65D 35/24	• with auxiliary devices (linings or inserts B65D 35/14) [1,2006.01]
M	B65D 35/54	• • • opening when closure is pressed against a surface to which contents are applied (nozzles B65D 35/38) [1,2006.01]
M	B65D 39/00	Closures arranged within necks or pouring openings or in discharge apertures, e.g. stoppers (lids or covers B65D 43/00 with additional securing elements B65D 45/00) [1,2006.01]
M	B65D 39/02	• Disc closures (discs with flanges B65D 39/04) [1,2006.01]
M	B65D 41/00	Caps, e.g. crown caps or crown seals, i.e. members having parts arranged for engagement with the external periphery of a neck or wall defining a pouring opening or discharge aperture; Protective cap-like covers for closure members, e.g. decorative covers of metal foil or paper (B65D 45/00 takes precedence clamping or other pressure-applying devices for securing or retaining closure members B65D 45/00) [1,2006.01]
M	B65D 43/00	Lids or covers for rigid or semi-rigid containers (for cooking vessels A47J 36/06; covers for pressure vessels in general F16J 13/00) [1,2006.01]
M	B65D 43/16	• • hinged for upward or downward movement (hinges of door or similar type E05D) [1,2006.01]
M	B65D 45/00	Clamping or other pressure-applying devices for securing or retaining closure members (screw-threaded or bayonet connections between stoppers or caps and containers B65D 39/08, B65D 41/04, B65D 41/34; expansible stoppers B65D 39/12; for pressure vessels in general F16J 13/00) [1,2006.01]
M	B65D 47/00	Closures with filling and discharging, or with discharging, devices (dispensers for liquid soap A47K 5/12) [1,2006.01]
M	B65D 47/20	• • comprising hand-operated members for controlling discharge (closures with discharge by pumping B65D 47/34 takes precedence) [1,2006.01]

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M	B65D 47/36	<ul style="list-style-type: none"> Closures with frangible parts adapted to be pierced, torn ; or removed, to provide discharge openings (B65D 51/18 takes precedence; caps with pierceable membranes B65D 41/20, B65D 41/50 ; <i>arrangements of closures with protective outer cap-like covers or of two or more co-operating closures B65D 51/18</i>) [1,2006.01]
M	B65D 47/42	<ul style="list-style-type: none"> with pads or like contents-applying means (brushes combined or associated with containers A46B 11/00) [1,2006.01]
M	B65D 50/00	<p>Closures with means for discouraging unauthorised opening or removal thereof, with or without indicating means, e.g. child-proof closures (tamper-indicating closures without means for discouraging, see the relevant groups, e.g. B65D 41/32 ; B65D 51/20 ; means per se for discouraging or indicating unauthorised opening or removal of closure B65D 55/02) [5,2006.01]</p>
M	B65D 50/04	<ul style="list-style-type: none"> requiring the combination of simultaneous actions, e.g. depressing and turning, lifting and turning, maintaining a part and turning another one (B65D 50/10 takes precedence; caps or covers secured by rotation with bayonet cams B65D 41/06 ; B65D 41/36) [5,2006.01]
M	B65D 50/14	<ul style="list-style-type: none"> openable or removable only by means of special opening member (containers with cutting, punching, or cutter accommodating means B65D 17/42 ; key-actuated closure locks B65D 55/14) [5,2006.01]
M	B65D 51/00	<p>Closures not otherwise provided for (covers or similar closures as engineering elements for pressure vessels in general F16J 13/00) [1,2006.01]</p>
M	B65D 51/02	<ul style="list-style-type: none"> Loosely-engaging lids or covers for jars, cans ; or like containers for liquids without means for effecting sealing of container (for cooking vessels A47J 36/06) [1,2006.01]
M	B65D 55/02	<ul style="list-style-type: none"> Locking devices; Means for discouraging or indicating unauthorised opening or removal of closure (protective covers for bottles B65D 23/08 ; protective cap-like outer covers for bottle or jar closures B65D 41/62 ; pressure-applying means B65D 45/00 ; closures with means for discouraging unauthorised opening or removal of closures B65D 50/00) [1,5,2006.01]
M	B65D 55/06	<ul style="list-style-type: none"> Deformable or tearable wires, strings ; or strips (containers specially constructed to be opened by tear strips, strings or the like B65D 17/00 ; caps or cap-like closures with tear-strips B65D 41/32); Use of seals [1,2006.01]
M	B65D 61/00	<p>External frames or supports adapted to be assembled around, or applied to, articles (collapsible containers B65D 5/00 ; B65D 6/16 ; B65D 6/24 ; B65D 8/14) [1,2006.01]</p>
M	B65D 69/00	<p>Articles joined together for convenience of storage or transport without the use of packaging elements (joining articles for convenience of packaging B65B 17/02) [1,2006.01]</p>
M	B65D 71/14	<ul style="list-style-type: none"> having the shape of a tube, without, or not being characterised by, end walls (sleeves B65D 59/04) [5,2006.01]
M	B65D 75/00	<p>Packages comprising articles or materials partially or wholly enclosed in strips, sheets, blanks, tubes ; or webs of flexible sheet material, e.g. in folded wrappers (B65D 71/00 takes precedence <i>bundles of articles held together by packaging elements for convenience of storage or transport, e.g. portable segregating carrier for plural receptacles such as beer cans or pop bottles, or bales of material B65D 71/00</i>) [1,5,2006.01]</p>
M	B65D 75/54	<ul style="list-style-type: none"> Cards, coupons ; or other inserts or accessories (opening devices B65D 75/70) [1,2006.01]
M	B65D 81/18	<ul style="list-style-type: none"> providing specific environment for contents, e.g. temperature above or below ambient (with thermal insulation B65D 81/38 ice-boxes with cooling means F25D) [1,6,2006.01]
M	B65D 81/32	<ul style="list-style-type: none"> for packaging two or more different materials which must be maintained separate prior to use in admixture (containers with removable or destructible partitions B65D 25/08) [1,2006.01]
M	B65D 81/38	<ul style="list-style-type: none"> with thermal insulation (vacuum bottles or the like A47J 41/00) [1,2006.01]
M	B65D 83/00	<p>Containers or packages with special means for dispensing contents (dispensing means incorporated in removable or non-permanently secured container closures B65D 47/00 ; for shops, stores, offices, bars, or the like A47F 1/04 ; showcases or show cabinets with dispensing arrangements A47F 3/02 ; magazines for screws or nuts in combination with spanners, wrenches or screwdrivers B25B 23/06 ; for use in connection with the handling of sheets, webs, or filamentary material B65H) [1,2006.01]</p>
L	B65D 83/02	<ul style="list-style-type: none"> for dispensing rod-shaped articles, e.g. needles [1,2006.01]

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M	B65D 83/04	• for dispensing annular, disc-shaped, or spherical or like small articles, e.g. tablets or pills [1,2006.01]
M	B65D 83/08	• for dispensing thin flat articles in succession (dispensers for surgical scalpel blades A61B 17/3215) [1,2006.01]
M	B65D 83/10	•• for dispensing razor – blades <i>or razor cartridges</i> [1,2006.01]
M	B65D 83/12	•• for dispensing tickets or tokens [1,2006.01]
C	B65D 83/14	• <i>Containers for delivery of dispensing liquid or semi-liquid contents by internal gaseous pressure, i.e. aerosol containers comprising propellant</i> [1,2006.01,2025.01]
N	B65D 83/141	•• <i>specially adapted for specific contents or propellants</i> [2025.01]
N	B65D 83/145	•• <i>with tamper-indicating means, e.g. located in front of nozzle outlets (tamper-indicating means obstructing initial actuation B65D 83/224)</i> [2025.01]
M	B65D 83/16	•• characterised by the actuating <i>Actuating</i> means [5,2006.01]
C	B65D 83/18	••• Container carried hand levers <i>Hand lever actuators (attached to actuator caps B65D 83/206)</i> [5,2006.01,2025.01]
N	B65D 83/182	•••• <i>combined with hand grips</i> [2025.01]
N	B65D 83/184	••••• <i>at the end of extension rods</i> [2025.01]
C	B65D 83/20	••• <i>Actuator caps</i> [5,2006.01,2025.01]
N	B65D 83/206	•••• <i>comprising cantilevered actuating elements, e.g. levers pivoting about living hinges</i> [2025.01]
C	B65D 83/22	••• <i>with means to disable actuation (B65D 50/00 takes precedence closures with means for discouraging unauthorized opening or removal thereof B65D 50/00)</i> [5,2006.01,2025.01]
N	B65D 83/222	•••• <i>Actuator locking means that are automatically engaged after each actuation</i> [2025.01]
N	B65D 83/224	•••• <i>Tamper-indicating means obstructing initial actuation</i> [2025.01]
M	B65D 83/24	••• with means to hold valve open <i>Arrangements for keeping the actuating means in the active position, e.g. for continuous dispensing</i> [5,2006.01]
C	B65D 83/28	•• <i>Nozzles, nozzle fittings or accessories specially adapted therefor</i> [5,2006.01,2025.01]
N	B65D 83/285	•• <i>for applying the content, e.g. brushes or pads</i> [2025.01]
C	B65D 83/30	••• <i>for guiding the flow of spray the dispensed content, e.g. funnels or hoods</i> [5,2006.01,2025.01]
N	B65D 83/303	•••• <i>using extension tubes located in or at the nozzle outlets</i> [2025.01]
C	B65D 83/38	•• <i>Details of the container body (pressure relief devices B65D 83/70)</i> [5,2006.01,2025.01]
N	B65D 83/384	••• <i>the container body being an aerosol container located in an outer shell or in an external container</i> [2025.01]
M	B65D 83/44	•• Valves specially adapted therefor for the discharge of contents ; Regulating devices (filling or discharging means B65D 83/42 ; pressure relief devices B65D 83/70) [5,2006.01]
M	B65D 83/46	••• Tilt valves (<i>non-reclosable valves</i> B65D 83/50 takes precedence) [5,2006.01]
M	B65D 83/48	•• Lift valves, e.g. operated by push action (<i>non-reclosable valves</i> B65D 83/50 takes precedence) [5,2006.01]
M	B65D 83/50	••• Non-reclosable valves, <i>e.g. for dispensing in a single dose</i> [5,2006.01]
C	B65D 83/52	••• for metering <i>Metering valves; Metering devices</i> [5,2006.01,2025.01]
N	B65D 83/53	•••• <i>with means for adjusting the metered quantity</i> [2025.01]
D	B65D 83/54	(transferred to B65D 83/52-B65D 83/53)
M	B65D 83/56	•• shut off when <i>with arrangements for interruption of dispensing when the container is inverted</i> [5,2006.01]
M	B65D 83/58	•• Separate with separate inlets for propellant and contents in duct to valve (B65D 83/60 takes precedence contents and propellant feeding into a duct upstream of the dispensing valve (with contents and propellant separated B65D 83/60) [5,2006.01]
M	B65D 83/60	•• Contents with contents and propellant separated [5,2006.01]
M	B65D 83/62	•• by membrane <i>membranes</i> , bag , <i>bags</i> or the like [5,2006.01]
M	B65D 83/64	•• by piston <i>pistons</i> [5,2006.01]
C	B65D 83/66	••• first initially separated , but finally mixed and subsequently mixed, <i>e.g. in a dispensing head</i> [5,2006.01,2025.01]
N	B65D 83/666	•••• <i>with contents and the propellant being fully mixed on, or prior to, first use, e.g. by breaking an ampoule containing one of those components</i> [2025.01]

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C	B65D 83/68	• • Dispensing two or more contents [5,2006.01,2025.01]
N	B65D 83/682	• • • initially separated and subsequently mixed [2025.01]
N	B65D 83/685	• • • • with at least one of the contents stored in a chamber associated with the dispensing head, e.g. for mixing during dispensing [2025.01]
N	B65D 83/687	• • • • with contents and the propellant being fully mixed on, or prior to, first use, e.g. by breaking an ampoule containing one of those components [2025.01]
M	B65D 83/72	• • with heating or cooling devices, e.g. heat exchangers [5,2006.01]
M	B65D 83/74	• • • with heating by exothermic reaction [5,2006.01]
C	B65D 83/76	• for dispensing fluent material contents by means of a piston or the like (hand tools for discharging fluent material through an outlet orifice by pressure B05C 17/005) [5,2006.01,2025.01]
N	B65D 83/761	• • the piston being actuated by a screw-shaft [2025.01]
N	B65D 83/762	• • • the contents being forced out through an internal passage in the screw-shaft [2025.01]
N	B65D 83/763	• • the piston being actuated by a reciprocating axial motion of a shaft which engages the piston, e.g. using a ratchet mechanism [2025.01]
N	B65D 83/764	• • the piston cooperating with a screw-thread in the side wall of the container [2025.01]
N	B65D 83/766	• • the piston being actuated by a spring-like mechanism [2025.01]
N	B65D 83/767	• • the piston having an integrated dispensing opening (B65D 83/762 takes precedence) [2025.01]
M	B65D 85/00	Containers, packaging elements or packages, specially adapted for particular articles or materials (B65D 71/00 ; B65D 83/00 take precedence; hand implements or travelling equipment A45C ; cosmetic or toiletry equipment A45D ; packages for surgical knives, scalpels or blades therefor A61B 17/3215 ; containers specially adapted for medical or pharmaceutical purposes A61J 1/00 ; paint cans B44D 3/12 ; oil cans F16N 3/04 ; containers for carrying small arms F41C 33/06 ; packaging of ammunition or explosive charges F42B 39/00 ; containers for record carriers, specially adapted for cooperation with the recording or reproducing apparatus G11B 23/00 bundles of articles held together by packaging elements for convenience of storage or transport B65D 71/00) [1,5,6,2006.01]
M	B65D 85/28	• • for pencils or pens (pencil boxes A45C 11/34) [1,2006.01]
M	B65D 85/50	• for living organisms, articles or materials sensitive to changes of environment or atmospheric conditions, e.g. land animals, birds, fish, water plants, non-aquatic plants, flower bulbs, cut flowers or foliage (devices for transporting live fish A01K 63/02) [1,2006.01]
M	B65D 85/58	• for ball bearings, washers, buttons or like spherical or disc-shaped articles (cards for buttons, collar studs or sleeve links A44B 7/00) [1,3,2006.01]
M	B65D 85/67	• for web or tape-like material (for jumbo rolls or rolls of floor covering B65D 85/66 ; for recording tape cassettes B65D 85/575) [1,3,5,2006.01]
M	B65D 88/00	Large containers (component parts, details or accessories B65D 90/00 ; gas holders of variable capacity F17B ; vessels for containing or storing compressed, liquefied or solidified gases F17C) [3,2006.01]
M	B65D 88/02	• rigid (B65D 88/34-B65D 88/78 take precedence; hoppers B65D 88/26) [3,2006.01]
M	B65D 88/16	• flexible (B65D 88/34-B65D 88/78 take precedence; hoppers B65D 88/26) [3,2006.01]
M	B65D 88/34	• having floating covers, e.g. floating roofs or blankets (venting means B65D 90/34) [3,2006.01]
M	B65D 88/54	• characterised by means facilitating filling or emptying (construction or shape of discharge section of hoppers B65D 88/28 ; gates or closures B65D 90/54) [3,2006.01]
M	B65D 90/02	• Wall construction (arrangements of leakage-indicating devices comprising hollow spaces within walls B65D 90/50+ ; arrangements of leakage-indicating devices comprising porous spaces or porous layers in walls B65D 90/505 ; arrangements of leakage-indicating devices comprising electrically conductive layers in walls B65D 90/513) [3,2006.01,2019.01]
M	B65D 90/10	• Manholes; Inspection openings; Covers therefor (safety features B65D 90/22) [3,2006.01]
M	B65D 90/22	• Safety features (floating covers B65D 88/34 ; arrangements of indicating or measuring devices B65D 90/48) [3,2006.01]
M	B65D 90/26	• Overfill prevention (spillage retaining means B65D 90/24 ; arrangements of indicating or measuring devices B65D 90/48) [3,2006.01]

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M	B65D 90/54	<ul style="list-style-type: none"> Gates or closures (for manholes B65D 90/10 ; covers or similar closure members, for pressure vessels in general F16J 13/00) [3,2006.01]
B81C		
M	B81C	<p>Note(s) [7]</p> <p>This subclass <u>does not cover</u>:</p> <ul style="list-style-type: none"> processes or apparatus for the manufacture or treatment of purely electrical or electronic devices, which are covered by section H, e.g. group H01L 21/00; processes or apparatus involving the manipulation of single atoms or molecules, which are covered by group B82B 3/00.
B82B		
M	B82B	<p>Note(s) [7,2011.01]</p> <ol style="list-style-type: none"> This subclass <u>does not cover</u> chemical or biological nanostructures per se, provided for elsewhere, e.g., in classes C08 or C12. Attention is drawn to the Note following the title of class B82, which defines the meaning of the terms "nanosize", "nanoscale" and "nanostructure" in this subclass. Subject matter classified in this subclass is further classified in subclass B82Y, in order to enable a comprehensive search of nanostructure technology using classification symbols of B82Y in combination with classification symbols of B82B. Nanostructures having specialised features or functions are further classified in appropriate places in other subclasses that provide for those features or functions, e.g. in G01Q , G02F 1/017, H01L 29/775 H10D 30/43.
B82Y		
M	B82Y	<p>Note(s) [2011.01]</p> <ol style="list-style-type: none"> This subclass <u>covers</u> applications and aspects of nanostructures which are produced by any method, and is not restricted to those that are formed by manipulation of individual atoms or molecules. Attention is drawn to the Note following the title of class B82, which defines the meaning of the terms "nanosize", "nanoscale" and "nanostructure" in this subclass. This subclass is intended to enable a comprehensive search of subject matter related to nanostructures by combination of classification symbols of this subclass with classification symbols from other subclasses. Therefore, this subclass covers aspects of nanostructures that might also be entirely or partially covered elsewhere in the IPC. This subclass is for obligatory supplementary classification of subject matter already classified as such in other classification places, e.g.: <ul style="list-style-type: none"> B82B Nanostructures formed by individual manipulation of atoms, molecules, or limited collections of atoms or molecules as discrete units; manufacture or treatment thereof A61K 9/51 Nanocapsules for medicinal preparations B05D 1/20 Langmuir-Blodgett films C01B 32/15 Carbon nanostructures, e.g. bucky-balls, nanotubes, nanocoils, nanodoughnuts or nanoonions G01Q Scanning probe techniques G02F 1/017 Optical quantum wells or boxes H01F 10/32 Nanostructured thin magnetic films H01F 41/30 Molecular beam epitaxy [MBE] H01L 29/775 Quantum wire FETs H10D 30/43 The classification symbols of this subclass are not listed first when assigned to patent documents.
M	C	<p>Note(s) [2009.01]</p> <ol style="list-style-type: none"> In section C, the definitions of groups of chemical elements are as follows: <ul style="list-style-type: none"> <u>Alkali metals</u>: Li, Na, K, Rb, Cs, Fr <u>Alkaline earth metals</u>: Ca, Sr, Ba, Ra <u>Lanthanides</u>: elements with atomic numbers 57 to 71 inclusive <u>Rare earths</u>: Sc, Y, Lanthanides <u>Actinides</u>: elements with atomic numbers 89 to 103 inclusive <u>Refractory metals</u>: Ti, V, Cr, Zr, Nb, Mo, Hf, Ta, W

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- 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 :

- pure chemistry, which covers inorganic compounds, organic compounds, macromolecular compounds, and their methods of preparation;
 - 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;
 - 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;
 - 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;
 - metallurgy, ferrous or non-ferrous alloys.
3. In all sections of the IPC, 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
	IA	IIA	IIIB	IVB	VB	VIB	VII	[-]VIII	
<i>Period/ Période</i>									
1	H								
2	Li	Be							
3	Na	Mg							
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh
6	Cs	Ba	Lanthanides	Hf	Ta	W	Re	Os	Ir
7	Fr	Ra	Actinides	Rf	Db	Sg	Bh	Hs	Mt

Lanthanides	La	Ce	Pr	Nd	Pm	Sm
Actinides	Ac	Th	Pa	U	Np	Pu

- 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.
- 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

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Notes (1)(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 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.
- 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.

C01B

M	C01B	Note(s) [3,6,7,2006.01]
		<ol style="list-style-type: none"> 1. In this subclass, tradenames that are often found in scientific and patent literature have been used in order to define precisely the scope of the groups. 2. Attention is drawn to the definitions of groups of chemical elements following the title of section C. 3. Attention is drawn to Note (1) after class C01, which defines the last place priority rule applied in this class, i.e. in the range of subclasses C01B-C01G and within these subclasses. 4. Therapeutic activity of compounds is further classified in subclass A61P.

C01F

M	C01F 7/78	• Compounds containing aluminium, <i>with or without oxygen or hydrogen</i> , and <i>containing</i> two or more other elements, with the exception of oxygen and hydrogen (aluminates C01F 7/02; compounds containing aluminium, fluorine and alkali or alkaline earth metals C01F 7/54; nitrates containing other cations besides aluminium C01F 7/66; sulfides, sulfites or sulfates containing other cations besides aluminium C01F 7/70-C01F 7/74) [2022.01]
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C01G

C	C01G 45/00	Compounds of manganese [1,2006.01,2025.01]
N	C01G 45/01	• Preparation or separation involving a liquid-liquid extraction, an adsorption or an ion-exchange [2025.01]
C	C01G 45/02	• Oxides; Hydroxides [1,2006.01,2025.01]
N	C01G 45/022	• • Manganese monoxide [2025.01]
N	C01G 45/024	• • Manganese dioxide [2025.01]
N	C01G 45/026	• • Dimanganese trioxide [2025.01]
N	C01G 45/028	• • Trimanganese tetraoxide [2025.01]
N	C01G 45/03	• Hydroxides; Oxyhydroxides [2025.01]
N	C01G 45/05	• Carbonates [2025.01]
C	C01G 45/06	• Halides; <i>Oxyhalides</i> [1,2006.01,2025.01]
N	C01G 45/07	• • Chlorides; Oxychlorides [2025.01]
C	C01G 45/12	• Manganates; Permanganates <i>Complex oxides containing manganese and at least one other metal element</i> [1,2006.01,2025.01]
N	C01G 45/1207	• • Permanganates $[(MnO_4)^-]$ or manganates $[(MnO_4)^{2-}]$ [2025.01]

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N	C01G 45/1214	• • • containing alkali metals [2025.01]
N	C01G 45/1221	• • Manganates or manganites with trivalent manganese, tetravalent manganese or mixtures thereof [2025.01]
N	C01G 45/1228	• • • of the type $(\text{MnO}_2)^-$, e.g. LiMnO_2 or $\text{Li}(\text{M}_x\text{Mn}_{1-x})\text{O}_2$ [2025.01]
N	C01G 45/1235	• • • of the type $(\text{Mn}_2\text{O}_4)^{2-}$, e.g. $\text{Li}_2\text{Mn}_2\text{O}_4$ or $\text{Li}_2(\text{M}_x\text{Mn}_{2-x})\text{O}_4$ [2025.01]
N	C01G 45/1242	• • • of the type $(\text{Mn}_2\text{O}_4)^-$, e.g. LiMn_2O_4 or $\text{Li}(\text{M}_x\text{Mn}_{2-x})\text{O}_4$ [2025.01]
N	C01G 45/125	• • • of the type $(\text{MnO}_3)^{n-}$, e.g. CaMnO_3 [2025.01]
N	C01G 45/1257	• • • • containing lithium, e.g. Li_2MnO_3 or $\text{Li}_2(\text{M}_x\text{Mn}_{1-x})\text{O}_3$ [2025.01]
N	C01G 45/1264	• • • • containing rare earths, e.g. $(\text{La}_{1-x}\text{Ca}_x)\text{MnO}_3$ or LaMnO_3 [2025.01]
N	C01G 45/20	• Compounds containing manganese, with or without oxygen or hydrogen, and containing one or more other elements (C01G 45/04-C01G 45/12 take precedence) [2025.01]
N	C01G 45/22	• • Compounds containing manganese, with or without oxygen or hydrogen, and containing two or more other elements [2025.01]
N	C01G 45/24	• • Hydroxides [2025.01]
C	C01G 51/00	Compounds of cobalt [1,2006.01,2025.01]
N	C01G 51/01	• Preparation or separation involving a liquid-liquid extraction, an adsorption or an ion-exchange [2025.01]
C	C01G 51/04	• Oxides; Hydroxides [1,2006.01,2025.01]
N	C01G 51/05	• Hydroxides; Oxyhydroxides [2025.01]
M	C01G 51/08	• Halides; Oxyhalides [1,2006.01]
D	C01G 51/12	(transferred to C01G 51/20)
N	C01G 51/15	• Sulfides; Oxysulfides [2025.01]
N	C01G 51/20	• Complexes with ammonia [2025.01]
N	C01G 51/40	• Complex oxides containing cobalt and at least one other metal element [2025.01]
N	C01G 51/42	• • containing alkali metals, e.g. LiCoO_2 [2025.01]
N	C01G 51/44	• • • containing manganese [2025.01]
N	C01G 51/50	• • • • of the type $(\text{MnO}_2)^{n-}$, e.g. $\text{Li}(\text{Co}_x\text{Mn}_{1-x})\text{O}_2$ or $\text{Li}(\text{M}_y\text{Co}_x\text{Mn}_{1-x-y})\text{O}_2$ [2025.01]
N	C01G 51/52	• • • • of the type $(\text{Mn}_2\text{O}_4)^{2-}$, e.g. $\text{Li}_2(\text{Co}_x\text{Mn}_{2-x})\text{O}_4$ or $\text{Li}_2(\text{M}_y\text{Co}_x\text{Mn}_{2-x-y})\text{O}_4$ [2025.01]
N	C01G 51/54	• • • • of the type $(\text{Mn}_2\text{O}_4)^-$, e.g. $\text{Li}(\text{Co}_x\text{Mn}_{2-x})\text{O}_4$ or $\text{Li}(\text{M}_y\text{Co}_x\text{Mn}_{2-x-y})\text{O}_4$ [2025.01]
N	C01G 51/56	• • • • of the type $(\text{MnO}_3)^{2-}$, e.g. $\text{Li}_2(\text{Co}_x\text{Mn}_{1-x})\text{O}_3$ or $\text{Li}_2(\text{M}_y\text{Co}_x\text{Mn}_{1-x-y})\text{O}_3$ [2025.01]
N	C01G 51/66	• • containing alkaline earth metals, e.g. SrCoO_3 [2025.01]
N	C01G 51/68	• • • containing rare earths, e.g. $(\text{La}_{0.3}\text{Sr}_{0.7})\text{CoO}_3$ [2025.01]
N	C01G 51/70	• • containing rare earths, e.g. LaCoO_3 (C01G 51/68 takes precedence) [2025.01]
N	C01G 51/80	• Compounds containing cobalt, with or without oxygen or hydrogen, and containing one or more other elements (C01G 51/02, C01G 51/06-C01G 51/40 take precedence) [2025.01]
N	C01G 51/82	• • Compounds containing cobalt, with or without oxygen or hydrogen, and containing two or more other elements [2025.01]
N	C01G 51/84	• • Hydroxides [2025.01]
C	C01G 53/00	Compounds of nickel [1,2006.01,2025.01]
N	C01G 53/01	• Preparation or separation involving a liquid-liquid extraction, an adsorption or an ion-exchange [2025.01]
C	C01G 53/04	• Oxides; Hydroxides [1,2006.01,2025.01]
N	C01G 53/05	• Hydroxides; Oxyhydroxides [2025.01]
M	C01G 53/08	• Halides; Oxyhalides [1,2006.01]
M	C01G 53/09	• • Chlorides; Oxychlorides [3,2006.01]
M	C01G 53/11	• Sulfides; Oxysulfides [3,2006.01]
L	C01G 53/12	• Complexes with ammonia [1,2006.01]
N	C01G 53/40	• Complex oxides containing nickel and at least one other metal element [2025.01]
N	C01G 53/42	• • containing alkali metals, e.g. LiNiO_2 [2025.01]
N	C01G 53/44	• • • containing manganese [2025.01]

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N	C01G 53/50	•••• of the type $(\text{MnO}_2)^{n-}$, e.g. $\text{Li}(\text{Ni}_x\text{Mn}_{1-x})\text{O}_2$ or $\text{Li}(\text{M}_y\text{Ni}_x\text{Mn}_{1-x-y})\text{O}_2$ [2025.01]
N	C01G 53/502	••••• containing lithium and cobalt [2025.01]
N	C01G 53/504	•••••• with the molar ratio of nickel with respect to all the metals other than alkali metals higher than or equal to 0.5, e.g. $\text{Li}(\text{M}_z\text{Ni}_x\text{Co}_y\text{Mn}_{1-x-y-z})\text{O}_2$ with $x \geq 0.5$ [2025.01]
N	C01G 53/506	••••••• with the molar ratio of nickel with respect to all the metals other than alkali metals higher than or equal to 0.8, e.g. $\text{Li}(\text{M}_z\text{Ni}_x\text{Co}_y\text{Mn}_{1-x-y-z})\text{O}_2$ with $x \geq 0.8$ [2025.01]
N	C01G 53/51	••••• containing sodium [2025.01]
N	C01G 53/52	•••• of the type $(\text{Mn}_2\text{O}_4)^{2-}$, e.g. $\text{Li}_2(\text{Ni}_x\text{Mn}_{2-x})\text{O}_4$ or $\text{Li}_2(\text{M}_y\text{Ni}_x\text{Mn}_{2-x-y})\text{O}_4$ [2025.01]
N	C01G 53/54	•••• of the type $(\text{Mn}_2\text{O}_4)^-$, e.g. $\text{Li}(\text{Ni}_x\text{Mn}_{2-x})\text{O}_4$ or $\text{Li}(\text{M}_y\text{Ni}_x\text{Mn}_{2-x-y})\text{O}_4$ [2025.01]
N	C01G 53/56	•••• of the type $(\text{MnO}_3)^{2-}$, e.g. $\text{Li}_2(\text{Ni}_x\text{Mn}_{1-x})\text{O}_3$ or $\text{Li}_2(\text{M}_y\text{Ni}_x\text{Mn}_{1-x-y})\text{O}_3$ [2025.01]
N	C01G 53/66	•• containing alkaline earth metals, e.g. SrNiO_3 or SrNiO_2 [2025.01]
N	C01G 53/68	••• containing rare earths, e.g. $(\text{La}_{1.62}\text{Sr}_{0.38})\text{NiO}_4$ [2025.01]
N	C01G 53/70	•• containing rare earths, e.g. LaNiO_3 (C01G 53/68 takes precedence) [2025.01]
N	C01G 53/80	• Compounds containing nickel, with or without oxygen or hydrogen, and containing one or more other elements (C01G 53/02, C01G 53/06-C01G 53/40 take precedence) [2025.01]
N	C01G 53/82	•• Compounds containing nickel, with or without oxygen or hydrogen, and containing two or more other elements [2025.01]
N	C01G 53/84	•• Hydroxides [2025.01]
C07C		
M	C07C 49/603	•• of a six-membered ring, e.g. <i>quinone methides</i> [3,2006.01]
M	C07C 50/00	Quinones- (for quinone methides, see unsaturated ketones with a keto group being part of a ring) [3,2006.01]
C07H		
N	C07H 23/00	Note(s) [2025.01] Metal salts of a compound are classified as the parent compound.
M	C07H 23/00	Compounds containing boron, silicon , or a metal, e.g. chelates , or vitamin B₁₂ (esters with inorganic acids C07H 11/00 ; metal salts, see parent compounds) [2,2006.01]
C08F		
M	C08F 30/00	Homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium or a metal (metal salts, e.g. phenolates or alcoholates, see the parent compounds) [2,2006.01]
M	C08F 130/00	Homopolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium , or a metal- (metal salts, e.g. phenolates or alcoholates, see the parent compounds) [2,2006.01]
M	C08F 230/00	Copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing phosphorus, selenium, tellurium , or a metal- (metal salts, e.g. phenolates or alcoholates, see the parent compounds) [2,2006.01]
C08L		
C	C08L 23/02	• not modified by chemical after-treatment [2,2006.01,2025.01]
N	C08L 23/025	•• Copolymers of unspecified olefins with monomers other than olefins [2025.01]
C	C08L 23/08	••• Copolymers of ethene (C08L 23/16 takes precedence) [2,2006.01,2025.01]
N	C08L 23/0807	•••• with unsaturated hydrocarbons only containing four or more carbon atoms [2025.01]
N	C08L 23/0846	•••• with unsaturated hydrocarbons containing atoms other than carbon or hydrogen [2025.01]
N	C08L 23/0853	••••• Ethene vinyl acetate copolymers [2025.01]
N	C08L 23/0861	•••••• Saponified copolymers, e.g. ethene vinyl alcohol copolymers [2025.01]
N	C08L 23/0869	••••• with unsaturated acids, e.g. [meth]acrylic acid; with unsaturated esters, e.g. [meth]acrylic acid esters [2025.01]
N	C08L 23/0876	•••••• Salts thereof, i.e. ionomers [2025.01]
N	C08L 23/0884	•••••• Epoxide-containing esters [2025.01]

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N	C08L 23/0892	• • • • • with monomers containing atoms other than carbon, hydrogen or oxygen [2025.01]
L	C08L 23/16	• • Ethene-propene or ethene-propene-diene copolymers [2,2006.01]
C	C08L 23/18	• • Homopolymers or copolymers of hydrocarbons having four or more carbon atoms [2,2006.01,2025.01]
C	C08L 23/20	• • • having four to nine carbon atoms [2,2006.01,2025.01]
T	C08L 23/22	• • • • Copolymers of isobutene; Butyl rubber; Homopolymers or copolymers of other iso-olefins [2,2006.01,2025.01]
C	C08L 23/26	• modified by chemical after-treatment (saponified copolymers C08L 23/0861 ; unsaturated acid salts C08L 23/0876) [2,2006.01,2025.01]
C	C08L 23/28	• • by reaction with halogens or halogen-containing compounds (C08L 23/32 takes precedence) [2,2006.01,2025.01]
N	C08L 23/283	• • • Iso-olefin halogenated homopolymers or copolymers [2025.01]
N	C08L 23/286	• • • Chlorinated polyethene [2025.01]
M	C08L 23/32	• • by reaction with compounds containing phosphorus –or sulfur-containing compounds [2,2006.01]

C09B

M	C09B 69/02	• Dyestuff salts, e.g. salts of acid dyes with basic dyes –(for Na, K, or NH salts of dyes or for chlorides, sulfates or chlorozincates, see the relevant dye groups) [3,2006.01]
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M	C12M	APPARATUS FOR ENZYMOLOGY OR MICROBIOLOGY (installations for fermenting manure A01C 3/02; preservation of living parts of humans or animals A01N 1/02 A01N 1/10; brewing apparatus C12C; fermentation apparatus for wine C12G; apparatus for preparing vinegar C12J 1/10) [3]
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C30B

M	C30B 29/02	Note(s) [3,2010.01] <ol style="list-style-type: none"> 1. In groups C30B 29/02-C30B 29/54, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, a material is classified in the last appropriate place. 2. 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 IPC refers. In this group, the system used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.
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C40B

M	C40B	Note(s) [2006.01] <ol style="list-style-type: none"> 1. In this subclass, the first 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 first appropriate place. 2. When classifying in this subclass, library members are also classified in the appropriate places elsewhere in the IPC (e.g. in section C) according to established procedure relating to "Markush"-type formulae (see paragraphs 100 and 101 of the Guide).
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D03D

M	D03D 45/20	• Changing bobbins, cops –or other loom components carried by the shuttle-stock [1,2006.01]
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D04H

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M D04H

Note(s) [2014.01]

1. In this subclass, the following terms or expressions are used with the meaning indicated:
 - "non-woven fabrics" means fabrics formed wholly or partly of textile material by processes comprising operations other than the weaving, knitting, braiding, lacing or knotting of yarns, threads or filaments for which provision is made in other subclasses of section D. This expression includes felts, cotton-wool and wadding;
 - "fibre" means a relatively-short, elongated member of natural or man-made material;
 - "filament" means an endless or quasi-endless, elongated member of natural or man-made material;
 - "yarn" means a unitary assembly of fibres, usually produced by spinning;
 - "thread" means an assembly of yarns or filaments, usually produced by twisting;
 - "synthetic" fibres or filaments means fibres or filaments or the like manufactured from synthesising polymers or small molecules. Examples are polyamide, acrylic, polyester or carbon fibres;
 - "artificial" fibres or filaments means fibres or filaments or the like manufactured by man from natural polymers or their derivatives. Examples are regenerated cellulosic fibres or semi-synthetic fibres;
 - "man-made" fibres or filaments means fibres or filaments which are manufactured by man including "synthetic" or "artificial" fibres.
2. In this subclass:
 - some of the non-woven fabrics can also be regarded as "layered products" within the meaning of subclass B32B, and further classification in that subclass should be considered in accordance with the notes thereto;
 - in cases where the making of non-woven fabrics involves the use of particular chemical compounds or compositions, e.g. for treating or bonding fibres, filaments or yarns, further classification in other appropriate subclasses should also be considered.
3. By varying the proportions of fibres or threads, and the chemical compounds or compositions, the final products may be given the appearance of paper, cardboard, leather or the like.

D06B

N D06B 21/00

Note(s) [2025.01]

This group covers the combined or successive treatments of textiles using liquids, gases or vapours.

M D06B 21/00

Successive treatments of textile materials by liquids, gases , or vapours { ~~successive treatments in which the characteristics of a single treatment are of interest only, or in which all treatments have characteristics provided for in a single main group, see the relevant groups for the single treatment~~ } [2,2006.01]

D06M

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M D06M

Note(s) [5,2010.01]

1. In each of the groups D06M 11/00-D06M 15/00, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, a substance is classified in the last appropriate place.
2. In this subclass:
 - a. within each one of main groups D06M 11/00-D06M 15/00, a mixture of substances is classified at least according to the essential ingredient. If more than one ingredient is essential, the mixture is classified, in the absence of an indication to the contrary, according to the essential ingredient which belongs to the last appropriate place in the sequence of substance;
 - b. treatment by mixtures of substances covered by two or more of main groups D06M 11/00-D06M 15/00 is classified in each appropriate main group.
3. In this subclass, the treatment of textiles, not provided for elsewhere in class D06, is classified according to the following principles:
 - a. treatment of textiles characterised by the treating agent in groups D06M 11/00-D06M 16/00;
 - b. treatment of textiles characterised by the process in group D06M 23/00.
4. 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 IPC refers.

D21H

M D21H

Note(s) [5,2006.01]

1. This subclass covers also pulp compositions for the preparation of fibreboard or other fibrous articles by wet processes.
2. In this subclass, the following terms are used with the meaning indicated:
 - "pulp" means a dispersion comprising paper-making fibres and optional additives, which is to be processed, and covers the term "*paper* stock"; it also means dry paper-making fibres which are to be made into paper by either wet or dry processes;
 - "paper" means paper, cardboard or wet-laid non-woven fabrics.
3. If a pulp composition or a paper, or a constituent thereof, is characterised by more than one feature provided for in this subclass, for example, by both the fibrous material and a coating or by both a colorant and a water-repelling agent, classification is made in all places providing for these features.

E04B

M E04B 1/66

- Sealings (additions of anti-leak properties to plaster C04B; bituminous sealing masses C08L 95/00; sealings for hydraulic engineering work in general E02B 3/16; against ground humidity or ground water E02D 31/02; coverings against rain or other precipitations of the atmosphere E04D ~~;- composition of material or manufacture of sealing foils, see the relevant classes for these foils~~) [1,2006.01]

E21B

M E21B

Note(s) [7,2006.01]

1. This subclass covers:
 - primarily equipment for drilling of earth or rock in their natural formation;
 - similar equipment for drilling of man-made structures in situ, e.g. of road surfaces or concrete structures.
2. This subclass does not cover:
 - hand-held drilling machines, e.g. for domestic use;
 - drilling equipment for manufacturing operations, i.e. where an article is worked, e.g. for further processing;
 - which are covered by relevant subclasses of section B, e.g. B23B;
 - compositions for drilling of boreholes or wells or for treating boreholes or wells, which compositions are covered by group C09K 8/00, e.g. compositions for enhanced recovery methods for obtaining hydrocarbons C09K 8/58.

M	F01B	MACHINES OR ENGINES, IN GENERAL OR OF POSITIVE-DISPLACEMENT TYPE, e.g. STEAM ENGINES (of rotary-piston or oscillating-piston type F01C; of non-positive-displacement type F01D; <i>internal-combustion engines F02 F02B; internal-combustion-aspects-of-reciprocating-piston-engines F02B 57/00, F02B 59/00; machines for liquids F03, F04; crankshafts, crossheads, connecting-rods F16C; flywheels F16F; gearings for interconverting rotary motion and reciprocating motion in general F16H; pistons, piston-rods, cylinders, for engines in general F16J - product engine plants F02G; machines or engines, other than of positive-displacement type, for liquids F03B; positive-displacement engines driven by liquids F03C; wind motors F03D; positive displacement machines for liquids F04B; rotary-piston, or oscillating-piston, positive-displacement machines for liquids F04C</i>)
M	F01B 1/10	• with more than one main shaft, e.g. coupled to common output shaft (combinations of two or more machines or engines F01B 21/00) [1,2006.01]
M	F01B 3/10	• Control of working-fluid admission or discharge peculiar thereto (suitable for more general application F01L) [1,2006.01]
M	F01B 9/00	Reciprocating-piston machines or engines characterised by connections between pistons and main shafts and , not specific to groups F01B 1/00-F01B 7/00 (connections disengageable during idling F01B 31/24) [1,2006.01]
M	F01B 11/04	• Engines combined with reciprocatory driven devices, e.g. hammers (with pumps F01B 23/08) [1,2006.01]
M	F01B 11/08	• with direct fluid transmission link (F01B 11/02 takes precedence) [1,2006.01]
M	F01B 13/00	Reciprocating-piston machines or engines with rotating cylinders in order to obtain the reciprocating-piston motion (machines or engines of flexible-wall type F01B 19/00) [1,2,2006.01]
M	F01B 15/00	Reciprocating-piston machines or engines with movable cylinders other than provided for in group F01B 13/00 (with movable cylinder sleeves for working-fluid control F01L) [1,2006.01]
M	F01B 21/00	Combinations of two or more machines or engines (F01B 23/00 takes precedence; combinations of two or more pumps F04; fluid gearing F16H) [1,2006.01]
M	F01B 23/00	Adaptations of machines or engines for special use; Combinations of engines with devices driven thereby (F01B 11/00 takes precedence; fluid gearing F16H) [1,2006.01]
M	F01B 25/00	Regulating, controlling, or safety means (regulating or controlling in general G05 controlling combustion engines F02D) [1,2006.01]
M	F01B 25/02	• Regulating or controlling by varying working-fluid admission or exhaust, e.g. by varying pressure or quantity (distributing or expansion valve gear F01L) [1,2006.01]
M	F01B 25/10	• • • Arrangements or adaptations of working-fluid admission or discharge valves (valves in general F16K) [1,2006.01]
M	F01B 25/12	• • • Devices dealing with sensing elements or final actuators or transmitting means between them, e.g. power-assisted (sensing elements alone F01B 25/04; final actuators alone F01B 25/08) [1,2006.01]
M	F01B 27/08	• • Means for moving crank off dead-centre (turning gear in general F16H) [1,2006.01]
M	F01B 29/10	• • Engines (refrigeration machines F25B) [1,2006.01]
M	F01B 31/00	Component parts, details, or accessories not provided for in, or of interest apart from, other groups (machine or engine casings, other than those peculiar to steam engines, F16M) [1,2006.01]
M	F01B 31/04	• Means for equalising torque in reciprocating-piston machines or engines (compensation of inertial forces, suppression of vibration in systems F16F) [1,2006.01]
M	F01B 31/08	• Cooling of steam engines (cooling of fluid machines or engines in general F01P) ; Heating; Heat insulation (heat insulation in general F16L 59/00) [1,2006.01]
M	F01B 31/10	• Lubricating arrangements of steam engines (of fluid machines or engines in general F01N) [1,2006.01]
M	F01B 31/12	• Arrangements of measuring or indicating devices (warning apparatus F01B 25/26; measuring instruments or the like per se G01) [1,2006.01]
M	F01B 31/16	• Silencers specially adapted for steam engines (arrangements of exhaust pipes or tubes on steam engines F01B 31/30; gas-flow silencers or exhaust silencers for machines or engines in general F01N) [1,2006.01]
M	F01B 31/34	• • Safety means against water hammer or against the penetration of water (steam traps F16T) [1,2006.01]

M	F02P	IGNITION, OTHER THAN COMPRESSION IGNITION, FOR INTERNAL-COMBUSTION ENGINES; TESTING OF IGNITION TIMING IN COMPRESSION-IGNITION ENGINES (specially adapted for rotary-piston or oscillating-piston engines F02B 53/12; ignition of combustion apparatus in general, glowing plugs F23Q; measuring of physical variables in general G01; controlling in general G05; data processing in general G06; electrical components in general, <u>see</u> section H; sparking plugs H01T)
M	F02P 7/00	Arrangement of distributors, circuit-makers, circuit-breakers or pick-up devices for electric spark ignition (advancing or retarding ignition or control therefor F02P 5/00; such devices <u>per se</u> , <u>see</u> the relevant classes of section H, e.g. rotary switches H01H 19/00, contact-breakers, distributors H01R 39/00, generators H02K) [1,2006.01]
F03D		
M	F03D	Note(s) <ul style="list-style-type: none"> 1. This subclass <u>covers</u> wind motors, i.e. mechanisms for converting the energy of wind into useful mechanical power, and the transmission of such power to its point of use. 2. This subclass <u>does not cover</u> electrical power generation or distribution aspects of wind-power plants, which are covered by section H, e.g. H02J or H02P. 3. In this subclass, the following terms or expressions are used with the meanings indicated: <ul style="list-style-type: none"> • "rotor" means the wind-engaging parts of the wind motor and the rotary member carrying them; • "rotation axis" means the axis of rotation of the rotor.
F21K		
M	F21K 9/00	Note(s) [2016.01] <ul style="list-style-type: none"> 1. In this group, the following expressions are used with the meaning indicated: <ul style="list-style-type: none"> • "light source" means a light-generating component intended for installation in a fitting or holder incorporated in a lighting device; • "retrofit light source" means a light source comprising substantially the same attachment means as those of incandescent lamps or fluorescent lamps. "Retrofit light sources" are specially adapted for replacing or substituting such lamps. 2. Semiconductor devices <u>per se</u>, or assemblies thereof, specially adapted for light emission, e.g. for use in light sources (in the sense of Note (1)) are covered by subclasses H01L H01S (e.g. H01L 33/00 H01S 5/00), H01S H10H (e.g. H01S 5/00 H10H 20/00 and H10H 29/20) and H10K (e.g. H10K 50/00 and H10K 59/00). 3. Lighting devices or systems in which light sources are used are covered by subclasses F21L or F21S. 4. When classifying in this group, classification is also made in subclass F21V if detail aspects covered by that subclass are of interest.
F21V		
M	F21V 29/503	• • • of light sources (cooling arrangements structurally associated with gas-discharge or vapour-discharge lamps H01J 61/52; cooling arrangements structurally associated with electric incandescent lamps H01K 1/58; cooling arrangements structurally associated with light-emitting diodes H01L 33/64 H10H 20/858) [2015.01]
M	F22B	METHODS OF STEAM GENERATION; STEAM BOILERS (steam-engine plants where engine aspects predominate F01K ; removal of combustion products or residues, e.g. cleaning of the combustion contaminated surfaces of tubes of boilers, F23J 3/00 ; domestic central heating systems using steam F24D ; heat exchange or heat transfer in general F28 ; generation of vapour in the cores of nuclear reactors G21)
M	F22B 1/00	Methods of steam generation characterised by form of heating method (use of solar heat F24S ; jackets or other cooling means in which steam is generated and which serve for cooling other apparatus, see the subclasses for such apparatus) [1,2006.01]
M	F22B 1/18	• • the heat carrier being a hot gas, e.g. waste gas such as exhaust gas of internal-combustion engines (use of waste heat of combustion engines, in general, F02) [1,2006.01]
M	F22B 3/04	• by drop in pressure of high-pressure hot water within pressure-reducing chambers, e.g. in accumulators (steam accumulators per se F01K 1/00) [1,2006.01]

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M	F22B 5/04	• Component parts thereof; Accessories therefor (covers or similar closure members for pressure vessels in general F16J 13/00) [1,2006.01]
M	F22B 13/00	Steam boilers of fire-box type, i.e. the combustion of fuel being performed in a chamber or fire-box with subsequent flue(s) or fire tube(s), both chamber or fire-box and boilers where both combustion chambers and subsequent flues or fire tubes being built-in-in-are arranged within the boiler body [1,2006.01]
M	F22B 23/06	• Component parts thereof, e.g. Field water tubes (heat-exchange tubes in general F28F) [1,2006.01]
L	F22B 29/02	• of forced-circulation type [1,2006.01]
M	F22B 29/06	• of once-through type, i.e. built-up from tubes receiving water at one end and delivering superheated steam at the other end of the tubes (F22B 33/00 takes precedence combinec low- and high-pressure boilers of forced-flow type F22B 33/16) [1,2006.01]
M	F22B 31/00	Modifications of boiler construction, or of tube systems, dependent on installation of combustion apparatus; Arrangements or dispositions of combustion apparatus (steam-generation characterised by heating method F22B 1/00 ; combustion apparatus per se F23) [1,2006.01]
M	F22B 33/00	Steam-generation plants, e.g. comprising steam boilers of different types in mutual association (arrangements or dispositions of steam-generation plants in marine vessels B63H 21/00) [1,2006.01]
M	F22B 35/00	Control systems for steam boilers (regulation or control of steam power plants F01K 7/00 ; for regulating feed-water supply F22D F22D 5/00; for controlling superheat temperature F22G 5/00 ; control of combustion F23N) [1,2006.01]
M	F22B 37/00	Component parts or details of steam boilers (venting devices F16K 24/00 ; steam traps or like apparatus F16T) [1,2006.01]
M	F22B 37/10	• • Water tubes; Accessories therefor (working of metal tubes B21D ; pipes in general F16L ; repairing leaks in water tubes F16L 55/16 ; F28F 11/00 ; cleaning water tubes of boilers F23J ; F28G ; baffles, screens, or deflectors formed of water tubes F23M 9/10) [1,2006.01]
M	F22B 37/20	• • • Supporting arrangements, e.g. for securing water-tube sets (construction of tube walls of furnaces including boiler furnaces F23M 5/08) [1,2006.01]
M	F22B 37/22	• • Drums; Headers; Accessories therefor (making boilers from sheet metal B21D 51/24 ; pressure vessels in general F16J 12/00 ; covers or similar closure members for pressure vessels in general F16J 13/00) [1,2006.01]
M	F22B 37/24	• • Supporting, suspending, or setting arrangements, e.g. heat shielding (frames, engine beds F16M) [1,2006.01]
M	F22B 37/26	• • Steam-separating arrangements (vapour liquid separators, e.g. for drying steam, B01D ; B04) [1,2006.01]
M	F22B 37/38	• • Determining or indicating operating conditions in steam boilers, e.g. monitoring direction or rate of water flow through water tubes (measuring or indicating instruments in general G01) [1,2006.01]
M	F22B 37/40	• • Arrangements of partition walls in flues of steam boilers, e.g. built-up from baffles (in flues or chimneys F23J 13/00) [1,2006.01]
M	F22B 37/42	• • Applications, arrangements, or dispositions of alarm or automatic safety devices (for feed-water heaters F22D 1/14 ; alarms responsive to undesired or abnormal conditions G08B) [1,2006.01]
M	F22B 37/44	• • • of safety valves (safety valves per se F16K) [1,2006.01]
M	F22B 37/46	• • • responsive to low or high water level, e.g. for checking, suppressing, or extinguishing combustion in boilers (fire fighting, fire extinction in general A62) [1,2006.01]
M	F22B 37/47	• • • responsive to abnormal temperature, e.g. actuated by fusible plugs (such alarms or devices per se G08B) [1,2006.01]
M	F22B 37/48	• • Devices or arrangements for removing water, minerals, or sludge from boilers (cleaning water tubes, furnace tubes, or the like of boilers F23J, F28G) [1,2006.01]
M	F22B 37/64	• • Mounting of, or supporting arrangements for, tube units (construction of tube walls of furnaces, e.g. boiler furnaces F23M 5/08) [1,2006.01]
M	F22B 37/76	• • Adaptations or mounting of devices for observing existence or direction of fluid flow (devices per se G01P) [1,2006.01]
M	F22B 37/78	• • Adaptations or mounting of level indicators (level indicators per se G01F) [1,2006.01]
F22D		
M	F22D 1/02	• with water tubes arranged in the boiler furnace, fire tubes, or flue ways (heat-exchange tubes in general F28F) [1,2006.01]

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M	F22D 1/10	• • • in horizontal arrangement (hollow fire bars, grates, or the like used as water tubes F23H 3/02) [1,2006.01]
M	F22D 1/14	• • Safety or venting devices (safety devices for boilers in general F22B 37/42) [1,2006.01]
M	F22D 1/40	• Combinations of exhaust-steam and smoke-gas preheaters (for locomotives F22D 1/42) [1,2006.01]
M	F22D 1/50	• incorporating thermal de-aeration of feed-water (de-aeration produced in the course of direct heat transfer F22D 1/28 ; thermal de-aeration of water per se B01D 19/00 ; G02F 1/20 ; valves for venting F16K 24/04) [3,2006.01]
M	F22D 3/08	• specially adapted for locomotives (locomotive boilers F22B 13/06) [1,2006.01]
M	F22D 3/10	• • Control devices (controlling water feed to boilers, or water level F22D 5/00) [1,2006.01]
M	F22D 5/00	Controlling water feed or water level; Automatic water feeding or water-level regulators (steam traps F16T ; measuring or indicating instruments G01 ; for indicating water level G01F ; level control in general G05D 9/00) [1,2006.01]
M	F22D 5/26	• Automatic feed-control systems (automatic safety devices F22B 37/42 ; controlling in general G05) [1,2006.01]
M	F22D 5/34	• Applications of valves (valves per se F16K) [1,2006.01]
M	F22D 7/00	Auxiliary devices for promoting water circulation (adaptation of boilers for promoting water circulation F22B 37/34) [1,2006.01]
M	F22D 11/02	• Arrangements of feed-water pumps (F22D 11/06 takes precedence; pumps per se F04) [1,2006.01]
M	F22G	SUPERHEATING OF STEAM (steam-separating arrangements in boilers F22B 37/26 ; removal of combustion products or residues, e.g. cleaning of the combustion contaminated surfaces of tubes of boilers, F23J 3/00)
M	F22G 1/00	Steam superheating characterised by heating method (exothermal chemical reactions not involving a supply of free oxygen gas, apparatus or devices for using the heat therefrom F24V 30/00) [1,2006.01]
M	F22G 3/00	Steam superheaters characterised by constructional features; Details or component parts thereof (general aspects of enclosed heat-exchangers F28D) [1,2006.01]
M	F22G 5/00	Controlling superheat temperature (control systems for steam boilers F22B ; regulating or controlling in general G05) [1,2006.01]
M	F22G 5/12	• by attemperating the superheated steam, e.g. by injected water sprays (spray mixers B01F 25/70) [1,2006.01]
M	F27B	FURNACES, KILNS, OVENS , OR RETORTS IN GENERAL; OPEN SINTERING OR LIKE APPARATUS (combustion apparatus F23 ; electric heating H05B)
M	F27B 1/00	Shaft or like vertical or substantially vertical furnaces (for preheating, burning, calcining or cooling lime, magnesia or dolomite C04B 2/12) [1,2006.01]
M	F27B 1/10	• Details, accessories , or equipment peculiar to specially adapted for furnaces of these types [1,2006.01]
M	F27B 1/14	• • • Arrangements of linings (linings in general F27D 1/00) [1,2006.01]
M	F27B 1/22	• Arrangements of heat-exchange apparatus (heat-exchangers in general F28C , F28D) [1,2006.01]
M	F27B 3/10	• Details, accessories , or equipment, e.g. dust-collectors, peculiar to specially adapted for hearth-type furnaces [1,2006.01]
M	F27B 5/00	Muffle furnaces; Retort furnaces; Other furnaces in which the charge is held completely isolated (F27B 9/00 takes precedence) furnaces through which the charge is moved mechanically or in which the charge moves by gravity F27B 9/00 [1,2006.01]
M	F27B 5/06	• Details, accessories , or equipment peculiar to specially adapted for furnaces of these types [1,2006.01]
M	F27B 7/20	• Details, accessories , or equipment peculiar to specially adapted for rotary-drum furnaces [1,2006.01]
M	F27B 9/00	Furnaces through which the charge is moved mechanically, e.g. of tunnel type (F27B 7/14 takes precedence) rotary-drum furnaces with means for agitating or moving the charge F27B 7/14 ; Similar furnaces in which the charge moves by gravity [1,2006.01]

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M	F27B 9/14	• characterised by the path of the charge during treatment; characterised by the means by which the charge is moved during treatment (F27B 9/28 takes precedence; travelling or movable supports or containers for the charge F27D 3/12 for treating continuous lengths of work F27B 9/28) [1,2006.01]
M	F27B 9/30	• Details, accessories ; or equipment peculiar to <i>specifically adapted for</i> furnaces of these types [1,2006.01]
M	F27B 11/00	Bell-type furnaces (for treating metal strips or wire C21D 9/663) [1,2006.01]
M	F27B 13/00	Furnaces with both stationary charge and progression of heating, e.g. of ring type ; or of the type in which a segmental kiln moves over a stationary charge [1,2006.01]
M	F27B 13/06	• Details, accessories ; or equipment peculiar to <i>specifically adapted for</i> furnaces of this type [1,2006.01]
M	F27B 14/08	• Details peculiar to <i>specifically adapted for</i> crucible, pot or tank furnaces [1,4,2006.01]
M	F27B 15/00	Fluidised-bed furnaces; Other furnaces using or treating finely-divided materials in dispersion (combustion apparatus in which combustion takes place in a fluidised bed of fuel or other particles F23G 10/00) [1,2006.01]
M	F27B 15/02	• Details, accessories ; or equipment peculiar to <i>specifically adapted for</i> furnaces of these types [1,2006.01]
M	F27B 21/08	• Details, accessories ; or equipment peculiar to <i>specifically adapted for</i> sintering or like apparatus [4,2006.01]
M	F27D	DETAILS OR ACCESSORIES OF FURNACES, KILNS, OVENS ; OR RETORTS, IN SO FAR AS THEY ARE OF KINDS OCCURRING IN MORE THAN ONE KIND OF FURNACE (combustion apparatus F23 ; electric heating H05B)
M	F27D	Subclass index
		CONSTRUCTIONAL FEATURES F27D 1/00
		HANDLING AND-OR SUPPORTING <i>THE</i> CHARGE F27D 3/00, F27D 5/00, F27D 15/00
		PREHEATING CHARGE <i>CHARGES</i> ; COOLING; USING WASTE HEAT OR <i>WASTE</i> GASES F27D 13/00; F27D 9/00, F27D 15/02; F27D 17/00
		ARRANGEMENTS <i>ARRANGEMENT</i> OF ELECTRIC HEATING ELEMENTS F27D 11/00
		ARRANGEMENTS <i>ARRANGEMENT</i> OF CONTROL AND- <i>MONITORING OR</i> SAFETY DEVICES F27D 19/00, F27D 21/00
		OTHER FEATURES; OTHER DETAILS F27D 7/00; F27D 25/00, F27D 27/00, F27D 99/00
M	F27D 1/00	Casings; Linings; Walls; Roofs (refractory materials C04B ; firebridges for combustion chambers F23M 3/00) [1,2006.01]
M	F27D 1/12	• incorporating cooling arrangements (constructions of tube assemblies in general F28) [1,2006.01]
M	F27D 1/14	• Supports for linings (<i>supports for monolithic linings</i> F27D 1/10 takes precedence) [1,2006.01]
M	F27D 1/18	• Door frames; Doors, lids ; or removable covers [1,2006.01]
M	F27D 3/00	Charging; Discharging; Manipulation of charge (conveying systems characterised by their application for specified purposes not otherwise provided for B65G 49/00 ; moving charge through a furnace F27B 9/14) [1,2006.01]
M	F27D 5/00	Supports, screens ; or the like for the charge within the furnace (travelling or movable supports F27D 3/12) [1,2006.01]
M	F27D 7/00	Forming, maintaining ; or circulating atmospheres in heating chambers [1,2006.01]
M	F27D 7/02	• Supplying steam, vapour, gases ; or liquids [1,2006.01]
M	F27D 7/06	• Forming or maintaining special atmospheres or vacuum within heating chambers (F27D 7/02 takes precedence <i>supplying steam, vapour, gases or liquids F27D 7/02</i>) [1,2006.01]
M	F27D 9/00	Cooling of furnaces or of charges therein (F27D 1/00 ; F27D 3/00 take precedence casings, linings, walls or roofs incorporating cooling arrangements F27D 1/12) [1,2006.01]
M	F27D 11/00	Arrangement of elements for electric heating in or on furnaces (electric heating per se H05B) [1,2006.01]

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M	F27D 11/10	• • Disposition of electrodes (automatic control of temperature G05D 23/00 ; electric discharge apparatus H01T ; arrangements for feeding or guiding electrodes H05B 7/10 ; automatic control of power by positioning of electrodes H05B 7/144) [1,3,2006.01]
C	F27D 17/00	Arrangement Arrangements for using waste heat (heat exchangers per se F28); Arrangement; Arrangements for using, or disposing of, waste gases (removing fumes in general B08B 15/00) [1,2006.01,2025.01]
N	F27D 17/10	• Arrangements for using waste heat [2025.01]
N	F27D 17/12	• • using heat storage [2025.01]
N	F27D 17/13	• • • using regenerative heat exchangers [2025.01]
N	F27D 17/15	• • using boilers [2025.01]
N	F27D 17/17	• • for preheating fluids, e.g. air or gases [2025.01]
N	F27D 17/18	• • for preheating solid materials [2025.01]
N	F27D 17/20	• Arrangements for treatment or cleaning of waste gases [2025.01]
N	F27D 17/22	• • for removing solid constituents [2025.01]
N	F27D 17/25	• • • using cyclones [2025.01]
N	F27D 17/28	• • for cooling waste gases [2025.01]
N	F27D 17/30	• Arrangements for extraction or collection of waste gases; Hoods therefor [2025.01]
M	F27D 21/00	Arrangement of monitoring devices; Arrangements Arrangement of safety devices [1,2006.01]
M	F27D 21/04	• Arrangements Arrangement of indicators or alarms [1,2006.01]
M	F27D 27/00	Stirring devices for molten material (F27D 3/14 takes precedence charging or discharging liquid or molten material F27D 3/14) [2010.01]
F41H		
M	F41H 11/00	Defence installations; Defence devices (constructional aspects, see section E, e.g. E04H 9/04); Means for clearing or detecting landmines [1,2006.01]
M	G01	Note(s) [6,7] <ol style="list-style-type: none"> 1. This class <u>covers</u>, in addition to "true" measuring instruments, other indicating or recording devices of analogous construction, and also signalling or control devices insofar as they are concerned with measurement (as defined in Note 2 below) and are not specially adapted to the particular purpose of signalling or control. 2. In this class, the following term is used with the meaning indicated: <ul style="list-style-type: none"> • "measuring" is used to cover considerably more than its primary or basic meaning. In this primary sense, it means finding a numerical expression of the value of a variable in relation to a unit or datum or to another variable of the same nature, e.g. expressing a length in terms of another length as in measuring a length with a scale; the value may be obtained directly (as just suggested) or by measuring some other variable of which the value can be related to the value of the required variable, as in measuring a change in temperature by measuring a resultant change in the length of a column of mercury. However, since the same device or instrument may, instead of giving an immediate indication, be used to produce a record or to initiate a signal to produce an indication or control effect, or may be used in combination with other devices or instruments to give a conjoint result from measurement of two or more variables of the same or different kinds, it is necessary to interpret "measuring" as including also any operation that would make it possible to obtain such a numerical expression by the additional use of some way of converting a value into figures. Thus the expression in figures may be actually made by a digital presentation or by reading a scale, or an indication of it may be given without the use of figures, e.g. by some perceptible feature (variable) of the entity (e.g. object, substance, beam of light) of which the variable being measured is a property or condition or by an analogue of such a feature (e.g. the corresponding position of a member without any scale, a corresponding voltage generated in some way). In many cases there is no such value indication but only an indication of difference or equality in relation to a standard or datum (of which the value may or may not be known in figures); the standard or datum may be the value of another variable of the same nature but of a different entity (e.g. a standard

measure) or of the same entity at a different time.

- In its simplest form, measurement may give merely an indication of presence or absence of a certain condition or quality, e.g. movement (in any direction or in a particular direction), or whether a variable exceeds a predetermined value.
3. Attention is drawn to the Notes following the titles of class B81 and subclass B81B relating to "microstructural devices" and "microstructural systems" and the Notes following the title of subclass B82B relating to "nanostructures".
 4. Attention is drawn to the Notes following the title of section G, especially as regards the definition of the term "variable".
 5. In many measuring arrangements, a first variable to be measured is transformed into a second, or further, variables. The second, or further, variables may be (a) a condition related to the first variable and produced in a member, or (b) a displacement of a member. Further transformation may be needed.
 - When classifying such an arrangement, (i) the transformation step, or each transformation step, that is of interest is classified, or (ii) if interest lies only in the system as a whole, the first variable is classified in the appropriate place.
 - This is particularly important where two or more conversions take place, for instance where a first variable, for example pressure, is transformed into a second variable, for example an optical property of a sensing body, and that second variable is expressed by means of a third variable, for example an electric effect. In such a case, the following classification places should be considered: the place for the transformation of the first variable, that for sensing the condition caused by that variable, subclass G01D for expression of the measurement, and finally the place for the overall system, if any.
 6. The measurement of change in the value of a physical property is classified in the same subclass as the measurement of that physical property, e.g. measurement of expansion of length is classified in subclass G01B.

M	G01N	INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES (measuring or testing <i>apparatus</i> or processes other than immunoassay, involving enzymes or microorganisms C12M, C12Q)
M	G01N 15/00	Investigating characteristics of particles; Investigating permeability, pore-volume or surface-area of porous materials (identification of microorganisms C12Q) [1,4,2006.01,2024.01]
	G02B	
M	G02B 6/12	• • of the integrated circuit kind (electric integrated circuits H01L 27/00 <i>H10B</i> , <i>H10D 84/00-H10D 89/00</i> , <i>H10F 19/00</i> , <i>H10F 39/00</i> , <i>H10H 29/00</i> , <i>H10K 19/00</i> , <i>H10K 39/00</i> , <i>H10K 59/00</i> , <i>H10N 19/00</i> , <i>H10N 39/00</i> , <i>H10N 59/00</i> , <i>H10N 69/00</i> , <i>H10N 79/00</i> , <i>H10N 89/00</i>) [4,2006.01]
	G03B	
M	G03B 23/02	• in which a picture is <i>pictures are</i> removed from a stock , and returned to the same stock or another one , <i>magazines</i> ; Magazines therefor [1,2006.01]
M	G05	Note(s) <ol style="list-style-type: none"> 1. This class <u>covers</u> methods, systems, and apparatus for controlling, in general. 2. Attention is drawn to the Notes following the title of section G, especially as regards the definition of the term "variable".

M	G05F	SYSTEMS FOR REGULATING ELECTRIC OR MAGNETIC VARIABLES (regulating the timing or recurrence frequency of pulses in radar or radio navigation systems G01S ; regulation of current or voltage, specially adapted for use in electronic time-pieces G04G 19/02 ; closed-loop systems for regulating non-electric variables by electric means G05D ; regulating power supply of digital computers G06F 1/26 ; for obtaining desired operating characteristics of electromagnets with armatures H01F 7/18 ; regulating electric power distribution networks H02J ; regulating the charging of batteries H02J 7/00 ; regulating of the output of static converters, e.g. switching regulators, H02M ; regulation of the output of electric generators H02N ; H02P 9/00 ; controlling transformers, reactors or choke coils H02P 13/00 ; regulating frequency response, gain, maximum output, amplitude or bandwidth of amplifiers H03G ; regulating tuning of resonant circuits H03J ; controlling generators of electronic oscillations or pulses H03L ; regulating characteristics of transmission lines H04B ; controlling electric light sources H05B 39/04 , H05B 41/36 , H05B 45/10 , H05B 45/20 , H05B 47/10 ; electric control of X-ray apparatus H05G 1/30) [4,5]
M	G05F 1/02	<ul style="list-style-type: none"> Regulating electric characteristics of arcs (arrangements for feeding or moving of electrodes for spot or seam welding or cutting B23K 9/12 ; arrangements for feeding electrodes for electric heating or electric lighting H05B 7/109 , H05B 31/18 ; automatic control of power for heating by discharge H05B 7/148) [1,2,2006.01]
M	G05F 1/10	<ul style="list-style-type: none"> Regulating voltage or current (G05F 1/02 takes precedence for electric railways B60M 3/02) [1,2006.01]
M	G05F 7/00	Regulating magnetic variables (details of apparatus for measuring magnetic variables involving magnetic resonance G01R 33/28) [1,5,2006.01]

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M G06

Note(s) [2011.01]

1. This class covers :
 - simulators which are concerned with the mathematics of computing the existing or anticipated conditions within the real device or system;
 - simulators which demonstrate, by means involving computing, the function of apparatus or of a system, if no provision exists elsewhere;
 - image data processing or generation.
2. This class does not cover :
 - combinations of writing implements with computing devices, which are covered by group B43K 29/08;
 - control functions derived from simulators, in general, which are covered by class G05, although such functions may be covered by the subclass of this class for the device controlled;
 - measurement or analysis of an individual variable to serve as an input to a simulator, which is covered by class G01;
 - simulators regarded as teaching or training devices which is the case if they give perceptible sensations having a likeness to the sensations a student would experience in reality in response to actions taken by him. Such simulators are covered by class G09;
 - components of simulators, if identical with real devices or machines, which are covered by the relevant subclass for these devices or machines and not by class G09.
3. In this class, the following terms or expressions are used with the meanings indicated:
 - "data" is used as the synonym of "information". Therefore, the term "information" is not used in subclass G06C;
 - "ICT [information and communication technology]" also covers "IT [information technology]";
 - "calculating or computing" includes, inter alia, operations on numerical values and on data expressed in numerical form. Of these terms "computing" is used throughout the class; "computation" is derived from this interpretation of "computing". In the French language the term "calcul" will serve for either term;
 - "simulator" is a device which may use the same time scale as the real device or operate on an expanded or compressed time scale. In interpreting this term models of real devices to reduced or expanded scales are not regarded as simulators;
 - "record carrier" means a body, such as a cylinder, disc, card, tape, or wire, capable of permanently holding information, which can be read-off by a sensing element movable relative to the recorded information.
4. Attention is drawn to the Notes following the title of section G, especially as regards the definition of the term "variable".

G06F

C	G06F 11/36	• Preventing Prevention of errors by analysis, debugging or testing or debugging of software [7,2006.01,2025.01]
N	G06F 11/3604	• • Analysis of software for verifying properties of programs (testing of software G06F 11/3668) [2025.01]
N	G06F 11/362	• • Debugging of software [2025.01]
N	G06F 11/3668	• • Testing of software [2025.01]
N	G06F 11/3698	• • Environments for analysis, debugging or testing of software [2025.01]
C	G06F 16/33	• • Querying [2019.01,2025.01]
C	G06F 16/332	• • • Query formulation [2019.01,2025.01]
N	G06F 16/3329	• • • • Natural language query formulation [2025.01]
N	G06F 16/3331	• • • Query processing [2025.01]
N	G06F 16/3332	• • • • Query translation [2025.01]
N	G06F 16/334	• • • • Query execution (filtering based on additional data G06F 16/335) [2025.01]
N	G06F 16/3349	• • • • Reuse of stored results of previous queries [2025.01]
C	G06F 16/34	• • Browsing; Visualisation therefor (browsing or visualisation for clustering or classification G06F 16/358) [2019.01,2025.01]
C	G06F 16/35	• • Clustering; Classification [2019.01,2025.01]

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N	G06F 16/353	• • • into predefined classes [2025.01]
N	G06F 16/355	• • • Creation or modification of classes or clusters [2025.01]
N	G06F 16/358	• • • Browsing; Visualisation therefor [2025.01]
G07D		
M	G07D 11/24	• • Managing the stock -inventory of valuable papers [2019.01]
G08G		
C	G08G 5/00	Traffic control systems for aircraft [1,2,2006.01,2025.01]
D	G08G 5/02	(transferred to G08G 5/54)
D	G08G 5/04	(transferred to G08G 5/80)
D	G08G 5/06	(transferred to G08G 5/51)
N	G08G 5/20	• Arrangements for acquiring, generating, sharing or displaying traffic information (arrangements for monitoring traffic G08G 5/72) [2025.01]
N	G08G 5/21	• • located onboard the aircraft [2025.01]
N	G08G 5/22	• • located on the ground [2025.01]
N	G08G 5/23	• • Details of user output interfaces, e.g. information presented [2025.01]
N	G08G 5/24	• • Details of user input interfaces, e.g. use of speech recognition or specific text formats [2025.01]
N	G08G 5/25	• • Transmission of traffic-related information between aircraft [2025.01]
N	G08G 5/26	• • Transmission of traffic-related information between aircraft and ground stations [2025.01]
N	G08G 5/265	• • • for managing air traffic control [ATC] clearance [2025.01]
N	G08G 5/27	• • for managing network coverage, e.g. ensuring transmission connections for UAVs [2025.01]
N	G08G 5/30	• Flight plan management [2025.01]
N	G08G 5/32	• • for flight plan preparation [2025.01]
N	G08G 5/34	• • for flight plan modification [2025.01]
N	G08G 5/36	• • for identification of authorised pilots [2025.01]
N	G08G 5/38	• • for identification of landing sites, e.g. of diversion airports [2025.01]
N	G08G 5/50	Note(s) [2025.01] When classifying in this group, each aspect relating to flight phases should be classified in subgroups G08G 5/51-G08G 5/54, whereas each aspect relating to the type of aircraft should be classified in subgroups G08G 5/55-G08G 5/57.
N	G08G 5/50	• Navigation or guidance aids [2025.01]
N	G08G 5/51	• • for control when on the ground, e.g. taxiing or rolling [2025.01]
N	G08G 5/52	• • for take-off [2025.01]
N	G08G 5/53	• • for cruising [2025.01]
N	G08G 5/54	• • for approach or landing [2025.01]
N	G08G 5/55	• • for a single aircraft [2025.01]
N	G08G 5/56	• • for two or more aircraft [2025.01]
N	G08G 5/57	• • for unmanned aircraft [2025.01]
N	G08G 5/58	• • for emergency situations, e.g. hijacking or bird strikes [2025.01]
N	G08G 5/59	• • in accordance with predefined flight zones, e.g. to avoid prohibited zones [2025.01]
N	G08G 5/70	• Arrangements for monitoring traffic-related situations or conditions [2025.01]
N	G08G 5/72	• • for monitoring traffic [2025.01]
N	G08G 5/74	• • for monitoring terrain [2025.01]
N	G08G 5/76	• • for monitoring atmospheric conditions [2025.01]
N	G08G 5/78	• • for monitoring wake turbulence [2025.01]
N	G08G 5/80	• Anti-collision systems [2025.01]
N	G08G 5/90	• specially adapted for urban air mobility [UAM] [2025.01]
M	G09G	ARRANGEMENTS OR CIRCUITS FOR CONTROL OF INDICATING DEVICES USING STATIC MEANS TO PRESENT VARIABLE INFORMATION (arrangements for transferring data between digital computers and displays G06F 3/14; static indicating arrangements comprising an association of a number of separate sources or light control cells G09F 9/00; static indicating arrangements comprising integral associations of a number of light sources H01J, H01K, H01L H05B 33/12 , H05B-33/12 H10H ; scanning, transmission or reproduction of documents or the like, e.g. facsimile transmission, details thereof H04N 1/00) [3,4,5]

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M	G09G	Note(s) [3]
		<ol style="list-style-type: none"> 1. This subclass <u>covers</u> indicator consoles, i.e. arrangements or circuits for processing control signals to achieve the display, e.g. for the calling up, reception, storage, regeneration, coding, decoding, addressing of control signals. 2. This subclass <u>does not cover</u> the structural details of the indicating devices, such as panels or tubes <u>per se</u>, or assemblies of individual light sources, which are covered by the relevant subclasses, e.g. <i>G02F</i>, <i>G09F</i>, H01J, H01K, H01L <i>H05B</i>, H10K, G02F, G09F, H05B <i>H10H</i>, <i>H10K</i>. 3. Contrary to subclass H04N, in which are classified display devices capable of representing continuous brightness value scales, this subclass is limited to devices using only a discrete number of brightness values, e.g. visible/non-visible. 4. The visual effect may be produced by a luminescent screen scanned by an electron beam, directly by controlled light sources, by projection of light, from controlled light sources onto characters, symbols, or elements thereof drawn on a support, or by electric, magnetic, or acoustic control of the parameters of light rays from an independent source.
G11B		
M	G11B 5/62	Note(s) [4]
		This group <u>does not cover</u> compositions, materials or processes, <u>per se</u> , which are covered by the relevant subclasses of section B or C.
G12B		
M	G12B	Note(s)
		<ol style="list-style-type: none"> 1. This subclass <u>covers</u> only details which are not restricted to measuring instruments or to any other apparatus covered by a single class. 2. This subclass <u>does not cover</u>: <ul style="list-style-type: none"> • details covered by any other subclass in section A, F, G or H. In particular, details restricted to the measuring instruments are covered by the relevant subclasses of class G01, e.g. G01D; • constructional details restricted to electric apparatus, e.g. casings, screenings, which are covered by subclass H05K or the relevant subclass in section H. 3. Attention is drawn to the Notes following the title of section G, especially as regards to the definition of the term "measuring" in Note (2) following the title of class G01.

These Notes cover the basic principles and general instructions for use of section H.

I. Section H covers:

- a. basic electric elements, which cover all electric units and the general mechanical structure of apparatus and circuits, including the assembly of various basic elements into what are called printed circuits and also cover to a certain extent the manufacture of these elements (when not covered elsewhere);
- b. generation of electricity, which covers the generation, conversion and distribution of electricity together with the controlling of the corresponding gear;
- c. applied electricity, which covers:
 - i. general utilisation techniques, viz. those of electric heating and electric lighting circuits;
 - ii. some special utilisation techniques, either electric or electronic in the strict sense, which are not covered by other sections of the Classification, including:
 1. electric light sources, including lasers;
 2. electric X-ray technique;
 3. electric plasma technique and the generation and acceleration of electrically charged particles or neutrons;
- d. basic electronic circuits and their control;
- e. radio or electric communication technique;
- f. the use of a specified material for the manufacture of the article or element described. In this connection, paragraphs 88 to 90 of the Guide should be referred to.

II. In this section, the following general rules apply:

- a. Subject to the exceptions stated in I(c), above, any electric aspect or part peculiar to a particular operation, process, apparatus, object or article, classified in one of the sections of the Classification other than section H, is always classified in the subclass for that operation, process, apparatus, object or article. Where common characteristics concerning technical subjects of similar nature have been brought out at class level, the electric aspect or part is classified, in conjunction with the operation, process, apparatus, object or article, in a subclass which covers entirely the general electrical applications for the technical subject in question;
- b. The electrical applications referred to under (a), above, either general or particular, include:
 - i. the therapeutic processes and apparatus, in class A61;
 - ii. the electric processes and apparatus used in various laboratory or industrial operations, in classes B01 and B03 and in subclass B23K;
 - iii. the electricity supply, electric propulsion and electric lighting of vehicles in general and of particular vehicles, in the subsection "Transporting" of section B;
 - iv. the electric ignition systems of internal-combustion engines, in subclass F02P, and of combustion apparatus in general, in subclass F23Q;
 - v. the whole electrical part of section G, i.e. measuring devices including apparatus for measuring electric variables, checking, signalling and calculating. Electricity in that section is generally dealt with as a means and not as an end in itself;
- c. All electrical applications, both general and particular, presuppose that the "basic electricity" aspect appears in section H (see I(a) above) as regards the electric "basic elements" which they comprise. This rule is also valid for applied electricity, referred to in I(c), above, which appears in section H itself.

M	H01C 7/00	Non-adjustable resistors formed as one or more layers or coatings; Non-adjustable resistors made from powdered conducting material or powdered semi-conducting material with or without insulating material (consisting of loose powdered or granular material H01C 8/00; resistors having potential barriers, e.g. field-effect resistors, H01L 29/00 <i>H10D 1/40-H10D 1/43</i> , <i>H10K 10/10</i>; semiconductor devices sensitive to electromagnetic or corpuscular radiation, e.g. photoresistors, H01L 31/00 <i>H10F 30/00</i>; magnetic field controlled resistors H10N 50/10; bulk negative resistance effect devices H10N 80/00) [1,2,2006.01]
	H01F	
M	H01F 1/00	Note(s) [2010.01] 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 IPC refers. In this group, the system used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.
M	H01F 1/03	Note(s) [6] Group H01F 1/40 takes precedence over <i>group</i> H01F 1/03
M	H01G	CAPACITORS; CAPACITORS, RECTIFIERS, DETECTORS, SWITCHING DEVICES, LIGHT-SENSITIVE OR TEMPERATURE-SENSITIVE DEVICES OF THE ELECTROLYTIC TYPE (selection of specified materials as dielectric H01B 3/00; capacitors having potential barriers H01L 29/00 <i>H10D 1/62</i> , <i>H10K 10/10</i>)
	H01L	
M	H01L	Note(s) [2,6,2006.01,2010.01] <ol style="list-style-type: none"> 1. This subclass is residual to class H10. 2. This subclass <u>covers</u> : <ol style="list-style-type: none"> 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 a 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 a 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: <ul style="list-style-type: none"> • "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

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"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 IPC refers. In this subclass, the system used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.

M H01L

Subclass index

~~Devices adapted for rectifying, amplifying, oscillating or switching~~ H01L 29/00

~~Devices sensitive to radiation~~ H01L 31/00

~~Devices for light emission~~ H01L 33/00

CONSTRUCTIONAL DETAILS OR ARRANGEMENTS H01L 23/00

ASSEMBLIES; INTEGRATED DEVICES

Assemblies of devices H01L 25/00

~~Integrated devices~~ H01L 27/00

MANUFACTURE OR TREATMENT H01L 21/00

- | | | |
|---|--------------|---|
| D | H01L 21/06 | (transferred to H10D 48/04) |
| D | H01L 21/08 | (transferred to H10D 48/042) |
| D | H01L 21/10 | (transferred to H10D 48/043) |
| D | H01L 21/103 | (transferred to H10D 48/044) |
| D | H01L 21/105 | (transferred to H10D 48/045) |
| D | H01L 21/108 | (transferred to H10D 48/046) |
| D | H01L 21/12 | (transferred to H10D 48/047) |
| D | H01L 21/14 | (transferred to H10D 48/048) |
| D | H01L 21/145 | (transferred to H10D 48/049) |
| D | H01L 21/16 | (transferred to H10D 48/07) |
| C | H01L 21/28 | • • • • Manufacture of electrodes on semiconductor bodies using processes or apparatus not provided for in groups H01L 21/20-H01L 21/268 [2,2006.01,2025.01] |
| M | H01L 21/30 | • • • • Treatment of semiconductor bodies using processes or apparatus not provided for in groups H01L 21/20-H01L 21/26 (manufacture of electrodes thereon H01L 21/28 , H10D 64/01) [2,2006.01] |
| M | H01L 21/3205 | • • • • • Deposition of non-insulating-, e.g. conductive- or resistive-, layers, on insulating layers; After-treatment of these layers (manufacture of electrodes H01L 21/28 , H10D 64/01) [5,2006.01] |
| D | H01L 21/328 | (transferred to H10D 48/01) |
| D | H01L 21/329 | (transferred to H10D 8/01, H10D 48/01) |
| D | H01L 21/33 | (transferred to H10D 48/01) |
| D | H01L 21/331 | (transferred to H10D 10/01, H10D 12/01) |
| D | H01L 21/332 | (transferred to H10D 18/01) |

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D	H01L 21/334	(transferred to H10D 48/01)
D	H01L 21/335	(transferred to H10D 30/01)
D	H01L 21/336	(transferred to H10D 30/01)
D	H01L 21/337	(transferred to H10D 30/01)
D	H01L 21/338	(transferred to H10D 30/01)
D	H01L 21/339	(transferred to H10D 44/01)
C	H01L 21/34	<ul style="list-style-type: none"> • • • the devices having semiconductor bodies not provided for in groups H01L 21/06 H01L 21/18, H01L 21/16 H10D 48/04 and H10D 48/07, and H01L 21/18 with or without impurities, e.g. doping materials [2,2006.01,2025.01]
C	H01L 21/44	<ul style="list-style-type: none"> • • • • Manufacture of electrodes on semiconductor bodies using processes or apparatus not provided for in groups H01L 21/36-H01L 21/428 [2,2006.01,2025.01]
M	H01L 21/46	<ul style="list-style-type: none"> • • • • Treatment of semiconductor bodies using processes or apparatus not provided for in groups H01L 21/36-H01L 21/428 (manufacture of electrodes thereon H01L 21/44 , H10D 64/01) [2,2006.01]
M	H01L 21/4763	<ul style="list-style-type: none"> • • • • • Deposition of non-insulating-, e.g. conductive-, resistive-, layers on insulating layers; After-treatment of these layers (manufacture of electrodes H01L 21/28 , H10D 64/01) [5,2006.01]
M	H01L 21/48	<ul style="list-style-type: none"> • • • Manufacture or treatment of parts, e.g. containers, prior to assembly of the devices, using processes not provided for in a single one of the groups H01L 21/06 H01L 21/326 H01L 21/18-H01L 21/326 or H10D 48/04-H10D 48/07 [2,2006.01]
M	H01L 21/50	<ul style="list-style-type: none"> • • • Assembly of semiconductor devices using processes or apparatus not provided for in a single one of the groups H01L 21/06 H01L 21/326 H01L 21/18-H01L 21/326 or H10D 48/04-H10D 48/07 [2,2006.01]
M	H01L 21/64	<ul style="list-style-type: none"> • Manufacture or treatment of solid -state devices other than semiconductor devices, or of parts thereof, not specially adapted for a single type of device provided for in groups H01L 31/00 H01L 33/00 or in subclasses H10K , subclasses H10F , H10H , H10K or H10N [2,2006.01]
M	H01L 21/71	<ul style="list-style-type: none"> • • Manufacture of specific parts of devices defined in group H01L 21/70 (H01L 21/28, H01L 21/44, H01L 21/48 and H10D 64/01 take precedence) [6,2006.01]
D	H01L 21/782	(transferred to H10D 99/00)
D	H01L 21/784	(transferred to H10D 84/01)
D	H01L 21/786	(transferred to H10D 86/01)
D	H01L 21/82	(transferred to H10D 89/00-H10D 89/10, H10D 99/00)
D	H01L 21/822	(transferred to H10D 84/03)
D	H01L 21/8222	(transferred to H10D 84/03)
D	H01L 21/8224	(transferred to H10D 84/03)
D	H01L 21/8226	(transferred to H10D 84/03)
D	H01L 21/8228	(transferred to H10D 84/03)
D	H01L 21/8232	(transferred to H10D 84/03)
D	H01L 21/8234	(transferred to H10D 84/03)
D	H01L 21/8236	(transferred to H10D 84/03)
D	H01L 21/8238	(transferred to H10D 84/03)
D	H01L 21/8248	(transferred to H10D 84/03)
D	H01L 21/8249	(transferred to H10D 84/03)
D	H01L 21/8252	(transferred to H10D 84/05)
D	H01L 21/8254	(transferred to H10D 84/07)
D	H01L 21/8256	(transferred to H10D 84/02-H10D 84/03)
D	H01L 21/8258	(transferred to H10D 84/08)
D	H01L 21/84	(transferred to H10D 86/01)
D	H01L 21/86	(transferred to H10D 86/03)

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M	H01L 23/00	Note(s)
		This group <u>does not cover</u> : <ul style="list-style-type: none"> • details of semiconductor bodies or of electrodes of devices provided for in group H01L 29/00 subclass H10D, which details are covered by that group subclass; • details peculiar to devices provided for in a single main-group-of-groups H01L 31/00-H01L 33/00 , or in a single subclass of H10K , subclass of subclasses H10F, H10H, H10K or H10N, which details are covered by those places.
M	H01L 25/00	Assemblies consisting of a plurality of individual semiconductor or other solid -state devices (devices consisting of a plurality of solid-state components formed in or on a common substrate H01L 27/00 H10D 89/00; photovoltaic modules or arrays of photovoltaic cells H01L 31/042 H10F 19/00) [2,5,2006.01]
M	H01L 25/03	• all the devices being of a type provided for in the same subgroup-of-groups H01L 27/00-H01L 33/00 , or in a single subclass of H10K , subclasses H10B, H10D, H10F, H10H, H10K or H10N , e.g. assemblies of rectifier diodes [5,2006.01]
M	H01L 25/065	• • • the devices being of a type provided for in group H01L 27/00 H10D 89/00 [5,2006.01,2023.01]
M	H01L 25/07	• • • the devices being of a type provided for in group H01L 29/00 subclass H10D [5,2006.01]
M	H01L 25/075	• • • the devices being of a type provided for in group H01L 33/00 H10H 20/00 [5,2006.01]
M	H01L 25/11	• • • the devices being of a type provided for in group H01L 29/00 subclass H10D [5,2006.01]
M	H01L 25/13	• • • the devices being of a type provided for in group H01L 33/00 H10H 20/00 [5,2006.01]
M	H01L 25/16	• the devices being of types provided for in two or more different main-groups-subclasses of groups H01L 27/00-H01L 33/00 , or in a single subclass of H10K , H10B, H10D, H10F, H10H, H10K or H10N , e.g. forming hybrid circuits [2,2006.01,2023.01]
M	H01L 25/18	• the devices being of types provided for in two or more different subgroups-main groups of the same main-group-subclass of groups H01L 27/00-H01L 33/00 , or in a single subclass of H10K , H10B, H10D, H10F, H10H, H10K or H10N [5,2006.01,2023.01]
D	H01L 27/00	(transferred to H10D 99/00)
D	H01L 27/00	(transferred to H10D 99/00)
D	H01L 27/01	(transferred to H10D 86/85)
D	H01L 27/02	(transferred to H10D 1/20, H10D 1/47, H10D 1/68, H10D 88/00-H10D 89/60)
D	H01L 27/04	(transferred to H10D 84/00)
D	H01L 27/06	(transferred to H10D 84/40)
D	H01L 27/07	(transferred to H10D 84/40)
D	H01L 27/08	(transferred to H10D 84/00)
D	H01L 27/082	(transferred to H10D 84/60-H10D 84/67)
D	H01L 27/085	(transferred to H10D 84/82)
D	H01L 27/088	(transferred to H10D 84/83-H10D 84/84)
D	H01L 27/092	(transferred to H10D 84/85)
D	H01L 27/095	(transferred to H10D 84/86)
D	H01L 27/098	(transferred to H10D 84/87)
D	H01L 27/10	(transferred to H10D 84/00)
D	H01L 27/102	(transferred to H10D 84/40-H10D 84/60)
D	H01L 27/105	(transferred to H10D 84/40, H10D 84/80)
D	H01L 27/118	(transferred to H10D 84/90)
D	H01L 27/12	(transferred to H10D 86/00, H10D 86/40-H10D 86/60, H10D 87/00)
D	H01L 27/13	(transferred to H10D 86/80-H10D 86/85)
D	H01L 27/14	(transferred to H10F 99/00)
D	H01L 27/142	(transferred to H10F 19/50)
D	H01L 27/144	(transferred to H10F 39/10)
D	H01L 27/146	(transferred to H10F 39/12, H10F 39/18)
D	H01L 27/148	(transferred to H10F 39/15)
D	H01L 27/15	(transferred to H10H 29/01, H10H 29/10-H10H 29/14, H10H 29/30-H10H 29/856)

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D	H01L 29/00	(transferred to H10D 99/00)
D	H01L 29/00	(transferred to H10D 99/00)
D	H01L 29/02	(transferred to H10D 62/00)
D	H01L 29/04	(transferred to H10D 62/40)
D	H01L 29/06	(transferred to H10D 62/10)
D	H01L 29/08	(transferred to H10D 62/13)
D	H01L 29/10	(transferred to H10D 62/17)
D	H01L 29/12	(transferred to H10D 62/80-H10D 62/81)
D	H01L 29/15	(transferred to H10D 62/815)
D	H01L 29/16	(transferred to H10D 62/83)
D	H01L 29/16	(transferred to H10D 62/83)
D	H01L 29/161	(transferred to H10D 62/832)
D	H01L 29/165	(transferred to H10D 62/822)
D	H01L 29/167	(transferred to H10D 62/834)
D	H01L 29/18	(transferred to H10D 62/82, H10D 62/84)
D	H01L 29/20	(transferred to H10D 62/85)
D	H01L 29/201	(transferred to H10D 62/852)
D	H01L 29/205	(transferred to H10D 62/824)
D	H01L 29/207	(transferred to H10D 62/854)
D	H01L 29/22	(transferred to H10D 62/86)
D	H01L 29/221	(transferred to H10D 62/862)
D	H01L 29/225	(transferred to H10D 62/826)
D	H01L 29/227	(transferred to H10D 62/864)
D	H01L 29/24	(transferred to H10D 62/80, H10D 62/82)
D	H01L 29/26	(transferred to H10D 62/80)
D	H01L 29/267	(transferred to H10D 62/82)
D	H01L 29/30	(transferred to H10D 62/50)
D	H01L 29/32	(transferred to H10D 62/53)
D	H01L 29/34	(transferred to H10D 62/57)
D	H01L 29/36	(transferred to H10D 62/60)
D	H01L 29/38	(transferred to H10D 62/00)
D	H01L 29/40	(transferred to H10D 64/00)
D	H01L 29/41	(transferred to H10D 64/20)
D	H01L 29/417	(transferred to H10D 64/23)
D	H01L 29/423	(transferred to H10D 64/27)
D	H01L 29/43	(transferred to H10D 64/60)
D	H01L 29/45	(transferred to H10D 64/62)
D	H01L 29/47	(transferred to H10D 64/64)
D	H01L 29/49	(transferred to H10D 64/66)
D	H01L 29/51	(transferred to H10D 64/68)
D	H01L 29/66	(transferred to H10D 48/00, H10D 48/30)
D	H01L 29/68	(transferred to H10D 48/32)
D	H01L 29/70	(transferred to H10D 48/34)
D	H01L 29/72	(transferred to H10D 48/34)
D	H01L 29/73	(transferred to H10D 10/00)
D	H01L 29/732	(transferred to H10D 10/40)
D	H01L 29/735	(transferred to H10D 10/60)
D	H01L 29/737	(transferred to H10D 10/80)
D	H01L 29/739	(transferred to H10D 12/00)
D	H01L 29/74	(transferred to H10D 18/00)
D	H01L 29/744	(transferred to H10D 18/60)
D	H01L 29/745	(transferred to H10D 18/65)
D	H01L 29/747	(transferred to H10D 18/80)
D	H01L 29/749	(transferred to H10D 18/40)
D	H01L 29/76	(transferred to H10D 48/36)

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D	H01L 29/762	(transferred to H10D 44/00)
D	H01L 29/765	(transferred to H10D 44/40)
D	H01L 29/768	(transferred to H10D 44/45)
D	H01L 29/772	(transferred to H10D 30/00, H10D 30/40)
D	H01L 29/775	(transferred to H10D 30/43)
D	H01L 29/778	(transferred to H10D 30/47)
D	H01L 29/78	(transferred to H10D 30/60-H10D 30/66)
D	H01L 29/786	(transferred to H10D 30/67)
D	H01L 29/788	(transferred to H10D 30/68)
D	H01L 29/792	(transferred to H10D 30/69)
D	H01L 29/80	(transferred to H10D 30/80)
D	H01L 29/808	(transferred to H10D 30/83)
D	H01L 29/812	(transferred to H10D 30/87)
D	H01L 29/82	(transferred to H10D 48/40)
D	H01L 29/84	(transferred to H10D 48/50)
D	H01L 29/86	(transferred to H10D 1/40, H10D 48/38)
D	H01L 29/8605	(transferred to H10D 1/43)
D	H01L 29/861	(transferred to H10D 8/00, H10D 8/20)
D	H01L 29/862	(transferred to H10D 8/30)
D	H01L 29/864	(transferred to H10D 8/40)
D	H01L 29/866	(transferred to H10D 8/25)
D	H01L 29/868	(transferred to H10D 8/50)
D	H01L 29/87	(transferred to H10D 8/80)
D	H01L 29/872	(transferred to H10D 8/60)
D	H01L 29/88	(transferred to H10D 8/70)
D	H01L 29/885	(transferred to H10D 8/75)
D	H01L 29/92	(transferred to H10D 1/62)
D	H01L 29/93	(transferred to H10D 1/64)
D	H01L 29/94	(transferred to H10D 1/66)
D	H01L 29/96	(transferred to H10D 48/00)

D H01L 31/00 (transferred to H10F 99/00)

D	H01L 31/02	(transferred to H10F 77/00)
D	H01L 31/0203	(transferred to H10F 77/50)
D	H01L 31/0216	(transferred to H10F 77/30)
D	H01L 31/0224	(transferred to H10F 77/20)
D	H01L 31/0232	(transferred to H10F 77/40)
D	H01L 31/0236	(transferred to H10F 77/70)
D	H01L 31/024	(transferred to H10F 77/60)
D	H01L 31/0248	(transferred to H10F 77/10)
D	H01L 31/0256	(transferred to H10F 77/12)
D	H01L 31/0264	(transferred to H10F 77/12)
D	H01L 31/0272	(transferred to H10F 77/121)
D	H01L 31/028	(transferred to H10F 77/122)
D	H01L 31/0288	(transferred to H10F 77/1223)
D	H01L 31/0296	(transferred to H10F 77/123)
D	H01L 31/0304	(transferred to H10F 77/124)
D	H01L 31/0312	(transferred to H10F 77/1226)
D	H01L 31/032	(transferred to H10F 77/12)
D	H01L 31/0328	(transferred to H10F 77/12)
D	H01L 31/0336	(transferred to H10F 77/12)
D	H01L 31/0352	(transferred to H10F 77/14)
D	H01L 31/036	(transferred to H10F 77/16)
D	H01L 31/0368	(transferred to H10F 77/164)
D	H01L 31/0376	(transferred to H10F 77/166)
D	H01L 31/0384	(transferred to H10F 77/162)

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D	H01L 31/0392	(transferred to H10F 77/169)
D	H01L 31/04	(transferred to H10F 10/00)
D	H01L 31/041	(transferred to H10F 10/00-H10F 19/90, H10F 77/80)
D	H01L 31/042	(transferred to H10F 19/00)
D	H01L 31/043	(transferred to H10F 19/40)
D	H01L 31/044	(transferred to H10F 19/70)
D	H01L 31/0443	(transferred to H10F 19/75)
D	H01L 31/0445	(transferred to H10F 19/30)
D	H01L 31/046	(transferred to H10F 19/31)
D	H01L 31/0463	(transferred to H10F 19/33)
D	H01L 31/0465	(transferred to H10F 19/35)
D	H01L 31/0468	(transferred to H10F 19/37)
D	H01L 31/047	(transferred to H10F 19/10)
D	H01L 31/0475	(transferred to H10F 19/20)
D	H01L 31/048	(transferred to H10F 19/80)
D	H01L 31/049	(transferred to H10F 19/85)
D	H01L 31/05	(transferred to H10F 19/90)
D	H01L 31/052	(transferred to H10F 10/00-H10F 19/90, H10F 77/63)
D	H01L 31/0525	(transferred to H10F 10/00-H10F 19/90, H10F 77/67)
D	H01L 31/053	(transferred to H10F 10/00-H10F 19/90, H10F 77/90)
D	H01L 31/054	(transferred to H10F 10/00-H10F 19/90, H10F 77/42)
D	H01L 31/055	(transferred to H10F 10/00-H10F 19/90, H10F 77/45)
D	H01L 31/056	(transferred to H10F 10/00-H10F 19/90, H10F 77/48)
D	H01L 31/06	(transferred to H10F 10/10)
D	H01L 31/061	(transferred to H10F 10/11)
D	H01L 31/062	(transferred to H10F 10/12)
D	H01L 31/065	(transferred to H10F 10/13)
D	H01L 31/068	(transferred to H10F 10/14)
D	H01L 31/0687	(transferred to H10F 10/142)
D	H01L 31/0693	(transferred to H10F 10/144)
D	H01L 31/07	(transferred to H10F 10/18)
D	H01L 31/072	(transferred to H10F 10/16)
D	H01L 31/0725	(transferred to H10F 10/161)
D	H01L 31/073	(transferred to H10F 10/162)
D	H01L 31/0735	(transferred to H10F 10/163)
D	H01L 31/074	(transferred to H10F 10/164)
D	H01L 31/0745	(transferred to H10F 10/165)
D	H01L 31/0747	(transferred to H10F 10/166)
D	H01L 31/0749	(transferred to H10F 10/167)
D	H01L 31/075	(transferred to H10F 10/17)
D	H01L 31/076	(transferred to H10F 10/172)
D	H01L 31/077	(transferred to H10F 10/174)
D	H01L 31/078	(transferred to H10F 10/19)
D	H01L 31/08	(transferred to H10F 30/00)
D	H01L 31/09	(transferred to H10F 30/10)
D	H01L 31/10	(transferred to H10F 30/20)
D	H01L 31/101	(transferred to H10F 30/21)
D	H01L 31/102	(transferred to H10F 30/22)
D	H01L 31/103	(transferred to H10F 30/221)
D	H01L 31/105	(transferred to H10F 30/223)
D	H01L 31/107	(transferred to H10F 30/225)
D	H01L 31/108	(transferred to H10F 30/227)
D	H01L 31/109	(transferred to H10F 30/222)
D	H01L 31/11	(transferred to H10F 30/24)
D	H01L 31/111	(transferred to H10F 30/26)

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D	H01L 31/112	(transferred to H10F 30/28)
D	H01L 31/113	(transferred to H10F 30/282)
D	H01L 31/115	(transferred to H10F 30/29)
D	H01L 31/117	(transferred to H10F 30/292)
D	H01L 31/118	(transferred to H10F 30/295)
D	H01L 31/119	(transferred to H10F 30/298)
D	H01L 31/12	(transferred to H10F 55/00)
D	H01L 31/14	(transferred to H10F 55/10)
D	H01L 31/147	(transferred to H10F 55/15)
D	H01L 31/153	(transferred to H10F 55/155)
D	H01L 31/16	(transferred to H10F 55/20)
D	H01L 31/167	(transferred to H10F 55/25)
D	H01L 31/173	(transferred to H10F 55/255)
D	H01L 31/18	(transferred to H10F 71/00)
D	H01L 31/20	(transferred to H10F 71/10)
D	H01L 33/00	(transferred to H10H 20/00-H10H 20/80, H10H 99/00)
D	H01L 33/00	(transferred to H10H 20/00-H10H 20/80, H10H 99/00)
D	H01L 33/02	(transferred to H10H 20/81)
D	H01L 33/04	(transferred to H10H 20/811)
D	H01L 33/06	(transferred to H10H 20/812)
D	H01L 33/08	(transferred to H10H 20/813)
D	H01L 33/10	(transferred to H10H 20/814)
D	H01L 33/12	(transferred to H10H 20/815)
D	H01L 33/14	(transferred to H10H 20/816)
D	H01L 33/16	(transferred to H10H 20/817)
D	H01L 33/18	(transferred to H10H 20/818)
D	H01L 33/18	(transferred to H10H 20/818)
D	H01L 33/20	(transferred to H10H 20/819)
D	H01L 33/22	(transferred to H10H 20/82)
D	H01L 33/24	(transferred to H10H 20/821)
D	H01L 33/26	(transferred to H10H 20/822)
D	H01L 33/28	(transferred to H10H 20/823)
D	H01L 33/30	(transferred to H10H 20/824)
D	H01L 33/32	(transferred to H10H 20/825)
D	H01L 33/34	(transferred to H10H 20/826)
D	H01L 33/36	(transferred to H10H 20/83)
D	H01L 33/38	(transferred to H10H 20/831)
D	H01L 33/40	(transferred to H10H 20/832)
D	H01L 33/42	(transferred to H10H 20/833)
D	H01L 33/44	(transferred to H10H 20/84)
D	H01L 33/46	(transferred to H10H 20/841)
D	H01L 33/48	(transferred to H10H 20/85)
D	H01L 33/48	(transferred to H10H 20/85)
D	H01L 33/50	(transferred to H10H 20/851)
D	H01L 33/52	(transferred to H10H 20/852)
D	H01L 33/54	(transferred to H10H 20/853)
D	H01L 33/56	(transferred to H10H 20/854)
D	H01L 33/58	(transferred to H10H 20/855)
D	H01L 33/60	(transferred to H10H 20/856)
D	H01L 33/62	(transferred to H10H 20/857)
D	H01L 33/64	(transferred to H10H 20/858)

H01M

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M H01M 14/00

Note(s) [2015.01]

This group does not cover solar cells, photocells, photoelectrochemical cells or photovoltaic cells, which are covered by the following groups:

- semiconductor devices sensitive to light and adapted for the conversion of the energy of such radiation into electrical energy are covered by group ~~H01L 31/00~~ **H10F 10/00**;
- solid-state devices using organic materials as active part specially adapted for sensing light and adapted for the conversion of the energy of such radiation into electrical energy are covered by group H10K 30/00;
- electrolytic light-sensitive devices, e.g. dye-sensitised solar cells, are covered by group H01G 9/20;
- photovoltaic modules structurally associated with energy storage means, e.g. batteries, are covered by group H02S 40/38.

H01S

M H01S 5/00

Note(s) [2010.01]

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 IPC refers. In this group, the system used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.

M H01S 5/00

Semiconductor lasers (superluminescent diodes ~~H01L 33/00~~ **H10H 20/00 [7,2006.01]**

H02K

C H02K 15/00

~~Methods-Processes~~ or apparatus specially adapted for manufacturing, assembling, maintaining or repairing of dynamo-electric machines [1,2006.01,2025.01]

- C H02K 15/02 • of stator or rotor bodies [1,2006.01,2025.01]
- N H02K 15/021 • • Magnetic cores [2025.01]
- N H02K 15/022 • • • with salient poles [2025.01]
- N H02K 15/0225 • • • • with claw-shaped poles [2025.01]
- N H02K 15/023 • • • Cage rotors [2025.01]
- N H02K 15/025 • • • characterised by skewed structures in cores [2025.01]
- N H02K 15/026 • • • Wound cores [2025.01]
- N H02K 15/027 • • • Punching the cores [2025.01]
- N H02K 15/0273 • • • Laminating the cores [2025.01]
- N H02K 15/0275 • • • Annealing the cores [2025.01]
- N H02K 15/0278 • • • Welding the cores [2025.01]
- N H02K 15/028 • • Fastening stator or rotor bodies to casings, supports, shafts or hubs [2025.01]
- C H02K 15/03 • • having permanent magnets [5,2006.01,2025.01]
- N H02K 15/035 • • • on the rotor [2025.01]
- N H02K 15/038 • • • Polarising or magnetising the permanent magnets [2025.01]
- C H02K 15/04 • of windings ~~—~~ prior to ~~their~~ mounting into ~~the~~ machines (insulating windings H02K 15/10, H02K 15/12) [1,2006.01,2025.01]
- N H02K 15/0407 • • Manufacturing of windings by etching, printing or stamping the complete coils [2025.01]
- N H02K 15/0414 • • the windings consisting of separate elements, e.g. bars, segments or half coils [2025.01]
- N H02K 15/0421 • • • and consisting of single conductors, e.g. hairpins [2025.01]
- N H02K 15/0428 • • • • Processes or apparatus for simultaneously twisting two or more hairpins [2025.01]
- N H02K 15/043 • • winding flat conductive wires or sheets [2025.01]
- N H02K 15/044 • • winding non-flat conductive wires, e.g. cables or cords [2025.01]
- N H02K 15/046 • • • Concentrated windings [2025.01]
- N H02K 15/047 • • • Distributed windings [2025.01]
- N H02K 15/048 • • • • of the wave winding type [2025.01]
- C H02K 15/06 • Embedding prefabricated windings in ~~the~~ machines [1,2006.01,2025.01]
- N H02K 15/061 • • Air-gap windings [2025.01]
- N H02K 15/062 • • Windings in slots; Salient pole windings [2025.01]
- N H02K 15/064 • • • Windings consisting of separate segments [2025.01]
- N H02K 15/0643 • • • • Hairpin windings [2025.01]
- N H02K 15/0646 • • • • Bar windings consisting of pre-assembled multiple conductors, e.g. Roebel bars [2025.01]
- N H02K 15/065 • • • Windings consisting of complete sections, e.g. coils or waves [2025.01]

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N	H02K 15/066	•••• inserted perpendicularly to the axis of the slots or inter-polar channels [2025.01]
N	H02K 15/067	•••• inserted in parallel to the axis of the slots or inter-polar channels [2025.01]
N	H02K 15/068	••••• Strippers; Embedding windings by strippers [2025.01]
L	H02K 15/085	•• by laying conductors into slotted stators [1,2006.01]
L	H02K 15/09	•• by laying conductors into slotted rotors [1,2006.01]
L	H02K 15/095	•• by laying conductors around salient poles [1,2006.01]
C	H02K 15/10	• Applying solid insulation to windings, stators or rotors , e.g. applying insulating tapes [1,2006.01,2025.01]
N	H02K 15/104	•• Insulating between conductors [2025.01]
N	H02K 15/106	•• Insulating between conductors and cores [2025.01]
N	H02K 15/108	••• with slot liners [2025.01]
C	H02K 15/12	• Impregnating, moulding insulation, heating or drying of windings, stators, rotors or machines [1,2006.01,2025.01]
N	H02K 15/121	•• of cores [2025.01]
N	H02K 15/122	•• of windings [2025.01]
N	H02K 15/123	•• of casings or enclosures [2025.01]
N	H02K 15/125	•• Heating or drying of machines in operational state, e.g. standstill heating [2025.01]
N	H02K 15/13	• Applying slot closure means in the cores; Manufacture of slot closure means [2025.01]
C	H02K 15/14	• Casings; Enclosures; Supports [1,2006.01,2025.01]
N	H02K 15/142	•• by moulding [2025.01]
N	H02K 15/144	•• of shafts, bearings or supports therefor [2025.01]
N	H02K 15/146	•• of brush holders [2025.01]
N	H02K 15/148	•• Insulating casings or enclosures (H02K 15/123 takes precedence) [2025.01]
C	H02K 15/16	• Centering Centring rotors within the stator ; Balancing rotors stators [1,2006.01,2025.01]
N	H02K 15/165	•• Balancing the rotors [2025.01]
N	H02K 15/20	• Shaping or compacting conductors or winding heads after the installation of the winding in the cores or machines; Applying fastening means on winding heads [2025.01]
N	H02K 15/22	•• Shaping or compacting conductors in slots or around salient poles (H02K 15/28 takes precedence) [2025.01]
N	H02K 15/24	•• Shaping or compacting winding heads (H02K 15/0428, H02K 15/28, H02K 15/36 take precedence) [2025.01]
N	H02K 15/26	••• Applying fastening means on winding heads [2025.01]
N	H02K 15/28	•• using electrodynamic forces [2025.01]
N	H02K 15/30	• Manufacture of winding connections [2025.01]
N	H02K 15/32	•• Manufacture of terminal arrangements; Connecting the terminals to external circuits [2025.01]
N	H02K 15/33	•• Connecting winding sections; Forming leads; Connecting leads to terminals [2025.01]
N	H02K 15/34	••• Connecting the neutral point [2025.01]
N	H02K 15/35	••• Form-wound windings [2025.01]
N	H02K 15/36	•••• Processes or apparatus for simultaneously twisting two or more open ends of hairpins after their insertion into the machine (for simultaneously twisting two or more hairpins prior to mounting into the machine H02K 15/0428) [2025.01]
N	H02K 15/38	•••• Manufacturing or repairing cooling fluid boxes, e.g. ensuring both electrical and fluid connection of terminals of fluid cooled windings [2025.01]
N	H02K 15/40	• Assembling dynamo-electric machines (H02K 15/16 takes precedence) [2025.01]
N	H02K 15/50	• Disassembling, repairing or modifying dynamo-electric machines (repairing of cooling fluid boxes H02K 15/38) [2025.01]
N	H02K 15/60	• Hoisting or moving dynamo-electric machines [2025.01]
N	H02K 15/70	• Cleaning dynamo-electric machines [2025.01]
N	H02K 15/80	• Manufacturing lines specially adapted for dynamo-electrical machines, e.g. feeding or unloading [2025.01]
N	H02K 15/90	• Positioning or clamping dynamo-electric machines, e.g. jigs [2025.01]
N	H02K 15/95	• Installation of current collectors, e.g. commutators, slip-rings or brushes [2025.01]

M	H02S	GENERATION OF ELECTRIC POWER BY CONVERSION OF INFRARED RADIATION, VISIBLE LIGHT OR ULTRAVIOLET LIGHT, e.g. USING PHOTOVOLTAIC [PV] MODULES (obtaining electrical energy from radioactive sources G21H 1/12; light sensitive inorganic semiconductor devices H01L 31/00 ; <i>H10F</i> ; <i>light sensitive organic semiconductor devices H10K 30/00</i> ; thermoelectric devices H10N 10/00; pyroelectric devices H10N 15/00 ; light sensitive organic semiconductor devices H10K 30/00) [2014.01]
M	H02S 10/30	• Thermophotovoltaic systems (photovoltaic cells specially adapted for conversion or sensing of infrared [IR] radiation H01L 31/00 <i>H10F 10/00</i> ; thermoelectric devices H10N 10/00) [2014.01]
M	H02S 30/00	Structural details of PV modules other than those related to light conversion (semiconductor device aspects of modules of electrolytic light sensitive devices H01G 9/20, of inorganic PV modules H01L 31/00 <i>H10F 10/00</i> , <i>H10F 19/00</i> , of organic PV modules H10K 30/00) [2014.01]
M	H02S 40/22	• Light-reflecting or light-concentrating means (directly associated with the PV cell or integrated with the PV cell H01L 31/054 <i>H10F 77/42</i>) [2014.01]
M	H02S 40/42	• Cooling means (cooling means directly associated or integrated with the PV cell H01L 31/052) [2014.01]
M	H02S 40/44	• Means to utilise heat energy, e.g. hybrid systems producing warm water and electricity at the same time (directly associated with the PV cell or integrated with the PV cell H01L 31/0525 <i>H10F 77/67</i>) [2014.01]
M	H03H	IMPEDANCE NETWORKS, e.g. RESONANT CIRCUITS; RESONATORS (measuring, testing G01R ; arrangements for producing a reverberation or echo sound G10K 15/08 ; impedance networks or resonators consisting of distributed impedances, e.g. waveguides, resonators, lines or other devices of the waveguide type , H01P ; control of amplification, e.g. bandwidth control of amplifiers, H03G ; tuning resonant circuits, e.g. tuning coupled resonant circuits, H03J ; networks for modifying the frequency characteristics of communication systems H04B)
M	H03H 1/02	• RC networks, e.g. filters (structural combinations of capacitors with other electric elements H01G) [3,2006.01]
M	H03H 7/00	Multiple-port networks comprising only passive electrical elements as network components (receiver input circuits H04B 1/18 ; networks simulating a length of communication cable H04B 3/40) [1,3,2006.01]
M	H03H 7/12	• Bandpass or bandstop filters with adjustable bandwidth and fixed centre frequency (H03H 7/09 takes precedence ; automatic control of bandwidth in amplifiers H03G 5/16) [1,2006.01]
M	H03H 7/46	• Networks for connecting several sources or loads, working on different frequencies or frequency bands, to a common load or source (for use in multiplex transmission systems H04J 1/00) [1,2006.01]
M	H03H 9/00	Networks comprising electromechanical or electro-acoustic elements; Electromechanical resonators (manufacture of piezoelectric, electrostrictive or magnetostrictive elements-devices with mechanical input or output, e.g. actuators or sensors, H10N 30/00, H10N 35/00; electro-acoustic transducers such as loudspeakers, microphones , or gramophone pick-ups or the like H04R) [1,2006.01]
M	H03H 9/13	• • for networks consisting of piezoelectric or electrostrictive materials (H03H 9/145 takes precedence for networks using surface acoustic waves H03H 9/145) [3,2006.01]
M	H03H 9/54	• comprising resonators of piezoelectric or electrostrictive material (H03H 9/64 takes precedence comprising resonators using surface acoustic waves H03H 9/64) [3,2006.01]
M	H03H 11/26	• Time-delay networks (analogue shift registers G11C 27/04) [3,2006.01]
M	H03H 11/34	• Networks for connecting several sources or loads working on different frequencies or frequency bands, to a common load or source (for use in multiplex transmission systems H04J 1/00) [3,2006.01]
M	H03H 11/44	• • Negative impedance converters (H03H 11/42 takes precedence ; used in frequency-selective networks H03H 11/10) [3,2006.01]
H05B		
M	<u>H05B 39/00</u>	<u>Circuit arrangements for electric light sources</u> [2022.01]

M	H05H	PLASMA TECHNIQUE (ion-beam tubes H01J 27/00 ; magnetohydrodynamic generators H02K 44/08 ; <i>apparatus or processes specially adapted for producing X-rays involving plasma generation H05G 2/00</i>); PRODUCTION OF ACCELERATED ELECTRICALLY-CHARGED PARTICLES OR OF NEUTRONS (obtaining neutrons from radioactive sources G21 ; e.g. G21B , G21C , G21G ;) ; PRODUCTION OR ACCELERATION OF NEUTRAL MOLECULAR OR ATOMIC BEAMS (atomic clocks G04F 5/14 ; devices using stimulated emission H01S ; frequency regulation by comparison with a reference frequency determined by energy levels of molecules, atoms, or subatomic particles H03L 7/26 ;)
M	H05H	Note(s) [3] <ol style="list-style-type: none"> This subclass <u>covers</u>: <ol style="list-style-type: none"> generating or handling plasma; devices not covered by subclass H01J and in which <i>for accelerating electrons, ion beams , or neutral particles are accelerated to high energies</i>; devices for producing neutral particle beams; targets for (a), (b) , or (c). Attention is drawn to subclass G21K <i>This subclass does not cover devices for producing, accelerating, influencing or using a flow of electrons or ions within electric discharge tubes or discharge lamps, which are covered by subclass H01J.</i>
M	H05H 1/42	• • • with provisions for introducing materials into the plasma, e.g. powder , liquid (electrostatic spraying, spraying apparatus with means for charging the spray electrically B05B 5/00 ; <i>or liquid [3,2006.01]</i>
M	H05H 1/52	• • using exploding wires or spark gaps (H05H 1/26 takes precedence; spark gaps in general H01F) [3,2006.01]
M	H05H 3/02	• Molecular or atomic-beam generation, e.g. resonant beam generation (gas masers H01S 1/06 ;) [3,2006.01]
M	H05H 5/03	• Accelerating tubes (vessels or containers of electric discharge tubes with improved potential distribution over surface of vessel H01J 5/06 ; shields of X-ray tubes associated with vessels or containers H01J 35/16 ;) [4,2006.01]
M	H05H 7/02	• Circuits or systems for supplying or feeding radio-frequency energy (radio-frequency generators H03B ;) [1,2006.01]
H05K		
C	H05K 5/00	Casings, cabinets or drawers for electric apparatus [1,2006.01,2025.01]
N	H05K 5/10	• comprising several parts forming a closed casing [2025.01]
N	H05K 5/13	• • assembled by screws [2025.01]
N	H05K 5/15	• • assembled by resilient members [2025.01]
N	H05K 5/30	• Side-by-side or stacked arrangements [2025.01]
H10B		
M	H10B	Note(s) [2024.01] In this subclass, the periodic system used is the I to VIII group system indicated in the Periodic Table under Note (3) of section C.
N	H10D	INORGANIC ELECTRIC SEMICONDUCTOR DEVICES [2025.01]

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N H10D

Note(s) [2025.01]

1. This subclass covers electric semiconductor devices having inorganic semiconductor bodies. This includes the following kind of devices:
 - inorganic semiconductor devices specially adapted for rectifying, amplifying, oscillating or switching, e.g. transistors or diodes;
 - individual inorganic resistors or capacitors having potential barriers;
 - individual resistors, capacitors or inductors having no potential barriers, and specially adapted for integration with other semiconductor components;
 - semiconductor bodies, or regions thereof, of devices covered by this subclass;
 - electrodes of devices covered by this subclass;
 - integrated devices, e.g. CMOS integrated devices;
 - processes or apparatus specially adapted for the manufacture or treatment of such devices.
2. This subclass does not cover:
 - electronic memory devices, which are covered by subclass H10B;
 - semiconductor devices sensitive to infrared radiation, light, electromagnetic radiation of shorter wavelength or corpuscular radiation, which are covered by subclass H10F;
 - light-emitting semiconductor devices having at least one potential barrier, which are covered by subclass H10H;
 - thermoelectric, thermomagnetic, piezoelectric, electrostrictive, magnetostrictive, magnetic-effect, superconducting or other electric solid-state devices, which are covered by subclass H10N;
 - constructional details other than semiconductor bodies or electrodes, which are covered by group H01L 23/00.
3. In this subclass, the periodic system used is the I to VIII group system indicated in the Periodic Table under Note (3) of section C.

N H10D

Subclass index

INDIVIDUAL DEVICES

Resistors; capacitors; inductors	H10D 1/00
Diodes	H10D 8/00
Bipolar junction transistors	H10D 10/00
Bipolar devices controlled by the field-effect	H10D 12/00
Thyristors	H10D 18/00
FETs	H10D 30/00
Charge transfer devices	H10D 44/00
Other individual devices	H10D 48/00

CONSTRUCTIONAL DETAILS

Bodies	H10D 62/00
Electrodes	H10D 64/00

INTEGRATED DEVICES; ASSEMBLIES OF MULTIPLE DEVICES

Assemblies of multiple devices	H10D 80/00
Integrated devices formed in or on semiconductor substrates that comprise only semiconducting layers	H10D 84/00
Integrated devices formed in or on insulating or conducting substrates	H10D 86/00
Integrated devices comprising both bulk devices and either SOI or SOS devices on the same substrate	H10D 87/00
3D integrated devices	H10D 88/00
Other aspects of integrated devices	H10D 89/00
SUBJECT MATTER NOT PROVIDED FOR IN OTHER GROUPS OF THIS SUBCLASS	H10D 99/00

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N H10D 1/00

Note(s) [2025.01]

This group covers:

- individual inorganic resistors or capacitors having potential barriers;
- individual resistors, capacitors or inductors having no potential barriers, and specially adapted for integration with other semiconductor components.

N H10D 1/00

Individual devices [2025.01]

N H10D 1/00

Resistors, capacitors or inductors [2025.01]

N H10D 1/20

• Inductors [2025.01]

N H10D 1/40

• Resistors [2025.01]

N H10D 1/43

• • Resistors having PN junctions [2025.01]

N H10D 1/47

• • Resistors having no potential barriers [2025.01]

N H10D 1/60

• Capacitors [2025.01]

N H10D 1/62

• • Capacitors having potential barriers [2025.01]

N H10D 1/64

• • • Variable-capacitance diodes, e.g. varactors [2025.01]

N H10D 1/66

• • • Conductor-insulator-semiconductor capacitors, e.g. MOS capacitors [2025.01]

N H10D 1/68

• • Capacitors having no potential barriers [2025.01]

N H10D 8/00

Note(s) [2025.01]

In this group, when the manufacture or treatment of a device is determined to be novel and non-obvious, the device itself is also classified.

N H10D 8/00

Diodes (variable-capacitance diodes H10D 1/64; gated diodes H10D 12/00) [2025.01]

N H10D 8/01

• Manufacture or treatment [2025.01]

N H10D 8/20

• Breakdown diodes, e.g. avalanche diodes [2025.01]

N H10D 8/25

• • Zener diodes [2025.01]

N H10D 8/30

• Point-contact diodes [2025.01]

N H10D 8/40

• Transit-time diodes, e.g. IMPATT or TRAPATT diodes [2025.01]

N H10D 8/50

• PIN diodes [2025.01]

N H10D 8/60

• Schottky-barrier diodes [2025.01]

N H10D 8/70

• Tunnel-effect diodes [2025.01]

N H10D 8/75

• • Tunnel-effect PN diodes, e.g. Esaki diodes [2025.01]

N H10D 8/80

• PNP diodes, e.g. Shockley diodes or break-over diodes [2025.01]

N H10D 10/00

Note(s) [2025.01]

In this group, when the manufacture or treatment of a device is determined to be novel and non-obvious, the device itself is also classified.

N H10D 10/00

Bipolar junction transistors [BJT] [2025.01]

N H10D 10/01

• Manufacture or treatment [2025.01]

N H10D 10/40

• Vertical BJTs [2025.01]

N H10D 10/60

• Lateral BJTs [2025.01]

N H10D 10/80

• Heterojunction BJTs [2025.01]

N H10D 12/00

Note(s) [2025.01]

In this group, when the manufacture or treatment of a device is determined to be novel and non-obvious, the device itself is also classified.

N H10D 12/00

Bipolar devices controlled by the field effect, e.g. insulated-gate bipolar transistors [IGBT] [2025.01]

N H10D 12/01

• Manufacture or treatment [2025.01]

N H10D 18/00

Note(s) [2025.01]

In this group, when the manufacture or treatment of a device is determined to be novel and non-obvious, the device itself is also classified.

N H10D 18/00

Thyristors [2025.01]

N H10D 18/01

• Manufacture or treatment [2025.01]

N H10D 18/40

• with turn-on by field effect [2025.01]

N H10D 18/60

• Gate-turn-off devices [2025.01]

N H10D 18/65

• • with turn-off by field effect [2025.01]

N H10D 18/80

• Bidirectional devices, e.g. triacs [2025.01]

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N	H10D 30/00	Note(s) [2025.01] <i>In this group, when the manufacture or treatment of a device is determined to be novel and non-obvious, the device itself is also classified.</i>
N	H10D 30/00	Field-effect transistors [FET] (insulated-gate bipolar transistors H10D 12/00) [2025.01]
N	H10D 30/01	• Manufacture or treatment [2025.01]
N	H10D 30/40	• FETs having zero-dimensional [0D], one-dimensional [1D] or two-dimensional [2D] charge carrier gas channels [2025.01]
N	H10D 30/43	• • having 1D charge carrier gas channels, e.g. quantum wire FETs or transistors having 1D quantum-confined channels [2025.01]
N	H10D 30/47	• • having 2D charge carrier gas channels, e.g. nanoribbon FETs or high electron mobility transistors [HEMT] [2025.01]
N	H10D 30/60	• Insulated-gate field-effect transistors [IGFET] (H10D 30/40 takes precedence) [2025.01]
N	H10D 30/62	• • Fin field-effect transistors [FinFET] [2025.01]
N	H10D 30/63	• • Vertical IGFETs (H10D 30/66 takes precedence) [2025.01]
N	H10D 30/64	• • Double-diffused metal-oxide semiconductor [DMOS] FETs [2025.01]
N	H10D 30/65	• • • Lateral DMOS [LDMOS] FETs [2025.01]
N	H10D 30/66	• • • Vertical DMOS [VDMOS] FETs [2025.01]
N	H10D 30/67	• • Thin-film transistors [TFT] [2025.01]
N	H10D 30/68	• • Floating-gate IGFETs [2025.01]
N	H10D 30/69	• • IGFETs having charge trapping gate insulators, e.g. MNOS transistors [2025.01]
N	H10D 30/80	• FETs having rectifying junction gate electrodes (H10D 30/40 takes precedence) [2025.01]
N	H10D 30/83	• • FETs having PN junction gate electrodes [2025.01]
N	H10D 30/87	• • FETs having Schottky gate electrodes, e.g. metal-semiconductor FETs [MESFET] [2025.01]
N	H10D 44/00	Note(s) [2025.01] <i>In this group, when the manufacture or treatment of a device is determined to be novel and non-obvious, the device itself is also classified.</i>
N	H10D 44/00	Charge transfer devices [2025.01]
N	H10D 44/01	• Manufacture or treatment [2025.01]
N	H10D 44/40	• Charge-coupled devices [CCD] [2025.01]
N	H10D 44/45	• • having field effect produced by insulated gate electrodes [2025.01]
N	H10D 48/00	Note(s) [2025.01] <i>In this group, when the manufacture or treatment of a device is determined to be novel and non-obvious, the device itself is also classified.</i>
N	H10D 48/00	Individual devices not covered by groups H10D 1/00-H10D 44/00 [2025.01]
N	H10D 48/01	• Manufacture or treatment [2025.01]
N	H10D 48/04	• • of devices having bodies comprising selenium or tellurium in uncombined form [2025.01]
N	H10D 48/042	• • • Preparation of foundation plates [2025.01]
N	H10D 48/043	• • • Preliminary treatment of the selenium or tellurium, its application to foundation plates or the subsequent treatment of the combination [2025.01]
N	H10D 48/044	• • • • Conversion of the selenium or tellurium to the conductive state [2025.01]
N	H10D 48/045	• • • • Treatment of the surface of the selenium or tellurium layer after having been made conductive [2025.01]
N	H10D 48/046	• • • • Provision of discrete insulating layers [2025.01]
N	H10D 48/047	• • • Application of an electrode to the exposed surface of the selenium or tellurium after the selenium or tellurium has been applied to foundation plates [2025.01]
N	H10D 48/048	• • • Treatment of the complete device, e.g. by electroforming to form a barrier [2025.01]
N	H10D 48/049	• • • • Ageing [2025.01]
N	H10D 48/07	• • of devices having bodies comprising cuprous oxide [Cu ₂ O] or cuprous iodide [CuI] [2025.01]
N	H10D 48/30	• Devices controlled by electric currents or voltages [2025.01]
N	H10D 48/32	• • Devices controlled by only the electric current supplied, or only the electric potential applied, to an electrode which does not carry the current to be rectified, amplified or switched [2025.01]

N	H10D 48/34	• • • Bipolar devices [2025.01]
N	H10D 48/36	• • • Unipolar devices [2025.01]
N	H10D 48/38	• • Devices controlled only by variation of the electric current supplied, or only the electric potential applied, to one or more of the electrodes carrying the current to be rectified, amplified, oscillated or switched [2025.01]
N	H10D 48/40	• Devices controlled by magnetic fields [2025.01]
N	H10D 48/50	• Devices controlled by mechanical forces, e.g. pressure [2025.01]
N	H10D 62/00	Constructional details [2025.01]
N	H10D 62/00	Semiconductor bodies, or regions thereof, of devices having potential barriers [2025.01]
N	H10D 62/10	• Shapes, relative sizes or dispositions of the regions of the semiconductor bodies; Shapes of the semiconductor bodies [2025.01]
N	H10D 62/13	Note(s) [2025.01] This group <u>covers</u> only semiconductor regions for devices that comprise three or more electrodes.
N	H10D 62/13	• • Semiconductor regions connected to electrodes carrying current to be rectified, amplified or switched, e.g. source or drain regions [2025.01]
N	H10D 62/17	• • Semiconductor regions connected to electrodes not carrying current to be rectified, amplified or switched, e.g. channel regions [2025.01]
N	H10D 62/40	• Crystalline structures [2025.01]
N	H10D 62/50	• Physical imperfections [2025.01]
N	H10D 62/53	• • the imperfections being within the semiconductor body [2025.01]
N	H10D 62/57	• • the imperfections being on the surface of the semiconductor body, e.g. the body having a roughened surface [2025.01]
N	H10D 62/60	• Impurity distributions or concentrations [2025.01]
N	H10D 62/80	Note(s) [2025.01] 1. When classifying in this group, constituents of a material are considered irrespective of any dopants or other impurities. 2. In this group: • groups H10D 62/81-H10D 62/815, covering quantum or superlattice structures, take precedence over groups H10D 62/82-H10D 62/826, covering heterojunctions; • groups H10D 62/82-H10D 62/826, covering heterojunctions, take precedence over groups H10D 62/83-H10D 62/864, covering other materials.
N	H10D 62/80	• characterised by the materials [2025.01]
N	H10D 62/81	• • of structures exhibiting quantum-confinement effects, e.g. single quantum wells; of structures having periodic or quasi-periodic potential variation [2025.01]
N	H10D 62/815	• • • of structures having periodic or quasi-periodic potential variation, e.g. superlattices or multiple quantum wells [MQW] [2025.01]
N	H10D 62/82	• • Heterojunctions [2025.01]
N	H10D 62/822	• • • comprising only Group IV materials heterojunctions, e.g. Si/Ge heterojunctions [2025.01]
N	H10D 62/824	• • • comprising only Group III-V materials heterojunctions, e.g. GaN/AlGaN heterojunctions [2025.01]
N	H10D 62/826	• • • comprising only Group II-VI materials heterojunctions, e.g. CdTe/HgTe heterojunctions [2025.01]
N	H10D 62/83	• • being Group IV materials, e.g. B-doped Si or undoped Ge [2025.01]
N	H10D 62/832	• • • being Group IV materials comprising two or more elements, e.g. SiGe [2025.01]
N	H10D 62/834	• • • further characterised by the dopants [2025.01]
N	H10D 62/84	Note(s) [2025.01] This group <u>does not cover</u> chemical compounds of selenium or of tellurium.

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N	H10D 62/84	• • being selenium or tellurium only [2025.01]
N	H10D 62/85	• • being Group III-V materials, e.g. GaAs [2025.01]
N	H10D 62/852	• • • being Group III-V materials comprising three or more elements, e.g. AlGaIn or InAsSbP [2025.01]
N	H10D 62/854	• • • further characterised by the dopants [2025.01]
N	H10D 62/86	• • being Group II-VI materials, e.g. ZnO [2025.01]
N	H10D 62/862	• • • being Group II-VI materials comprising three or more elements, e.g. CdZnTe [2025.01]
N	H10D 62/864	• • • further characterised by the dopants [2025.01]
N	H10D 64/00	Electrodes of devices having potential barriers [2025.01]
N	H10D 64/01	• Manufacture or treatment [2025.01]
N	H10D 64/20	• Electrodes characterised by their shapes, relative sizes or dispositions [2025.01]
N	H10D 64/23	• • Electrodes carrying the current to be rectified, amplified, oscillated or switched, e.g. sources, drains, anodes or cathodes [2025.01]
N	H10D 64/27	• • Electrodes not carrying the current to be rectified, amplified, oscillated or switched, e.g. gates [2025.01]
N	H10D 64/60	• Electrodes characterised by their materials [2025.01]
N	H10D 64/62	• • Electrodes ohmically coupled to a semiconductor [2025.01]
N	H10D 64/64	• • Electrodes comprising a Schottky barrier to a semiconductor [2025.01]
N	H10D 64/66	• • Electrodes having a conductor capacitively coupled to a semiconductor by an insulator, e.g. MIS electrodes [2025.01]
N	H10D 64/68	• • • characterised by the insulator, e.g. by the gate insulator [2025.01]
N	H10D 80/00	Integrated devices; Assemblies of multiple devices [2025.01]
N	H10D 80/00	Assemblies of multiple devices comprising at least one device covered by this subclass [2025.01]
N	H10D 80/20	• the at least one device being covered by groups H10D 1/00-H10D 48/00, e.g. assemblies comprising capacitors, power FETs or Schottky diodes [2025.01]
N	H10D 80/30	• the at least one device being covered by groups H10D 84/00-H10D 86/00, e.g. assemblies comprising integrated circuit processor chips [2025.01]
N	H10D 84/00	Note(s) [2025.01] In this group, when the manufacture or treatment of a device is determined to be novel and non-obvious, the device itself is also classified.
N	H10D 84/00	Integrated devices formed in or on semiconductor substrates that comprise only semiconducting layers, e.g. on Si wafers or on GaAs-on-Si wafers [2025.01]
N	H10D 84/01	• Manufacture or treatment [2025.01]
N	H10D 84/02	• • characterised by using material-based technologies [2025.01]
N	H10D 84/03	• • • using Group IV technology, e.g. silicon technology or silicon-carbide [SiC] technology [2025.01]
N	H10D 84/05	• • • using Group III-V technology [2025.01]
N	H10D 84/07	• • • using Group II-VI technology [2025.01]
N	H10D 84/08	• • • using combinations of technologies, e.g. using both Si and SiC technologies or using both Si and Group III-V technologies [2025.01]
N	H10D 84/40	• characterised by the integration of at least one component covered by groups H10D 12/00 or H10D 30/00 with at least one component covered by groups H10D 10/00 or H10D 18/00, e.g. integration of IGFETs with BJTs [2025.01]
N	H10D 84/60	• characterised by the integration of at least one component covered by groups H10D 10/00 or H10D 18/00, e.g. integration of BJTs (H10D 84/40 takes precedence) [2025.01]
N	H10D 84/63	• • Combinations of vertical and lateral BJTs [2025.01]
N	H10D 84/65	• • Integrated injection logic [2025.01]
N	H10D 84/67	• • Complementary BJTs [2025.01]
N	H10D 84/80	• characterised by the integration of at least one component covered by groups H10D 12/00 or H10D 30/00, e.g. integration of IGFETs (H10D 84/40 takes precedence) [2025.01]
N	H10D 84/82	• • of only field-effect components [2025.01]
N	H10D 84/83	• • • of only insulated-gate FETs [IGFET] [2025.01]
N	H10D 84/84	• • • • Combinations of enhancement-mode IGFETs and depletion-mode IGFETs [2025.01]

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N	H10D 84/85	• • • Complementary IGFETs, e.g. CMOS [2025.01]
N	H10D 84/86	• • of Schottky-barrier gate FETs [2025.01]
N	H10D 84/87	• • of PN-junction gate FETs [2025.01]
N	H10D 84/90	• Masterslice integrated circuits [2025.01]
N	H10D 86/00	Note(s) [2025.01] In this group, when the manufacture or treatment of a device is determined to be novel and non-obvious, the device itself is also classified.
N	H10D 86/00	Integrated devices formed in or on insulating or conducting substrates, e.g. formed in silicon-on-insulator [SOI] substrates or on stainless steel or glass substrates [2025.01]
N	H10D 86/01	• Manufacture or treatment [2025.01]
N	H10D 86/03	• • wherein the substrate comprises sapphire, e.g. silicon-on-sapphire [SOS] [2025.01]
N	H10D 86/40	• characterised by multiple TFTs [2025.01]
N	H10D 86/60	• • wherein the TFTs are in active matrices [2025.01]
N	H10D 86/80	• characterised by multiple passive components, e.g. resistors, capacitors or inductors [2025.01]
N	H10D 86/85	• • characterised by only passive components [2025.01]
N	H10D 87/00	Integrated devices comprising both bulk components and either SOI or SOS components on the same substrate [2025.01]
N	H10D 88/00	Three-dimensional [3D] integrated devices [2025.01]
N	H10D 89/00	Aspects of integrated devices not covered by groups H10D 84/00-H10D 88/00 [2025.01]
N	H10D 89/10	• Integrated device layouts [2025.01]
N	H10D 89/60	• Integrated devices comprising arrangements for electrical or thermal protection, e.g. protection circuits against electrostatic discharge [ESD] [2025.01]
N	H10D 99/00	Subject matter not provided for in other groups of this subclass [2025.01]
N	H10F	INORGANIC SEMICONDUCTOR DEVICES SENSITIVE TO INFRARED RADIATION, LIGHT, ELECTROMAGNETIC RADIATION OF SHORTER WAVELENGTH OR CORPUSCULAR RADIATION [2025.01]
N	H10F	Note(s) [2025.01] <ol style="list-style-type: none"> 1. This subclass covers inorganic radiation-sensitive semiconductor devices insofar as these devices are specially adapted for: <ul style="list-style-type: none"> • the conversion of the radiation energy into electrical energy; or • the control of electrical energy by such radiation. 2. In this subclass, "infrared radiation" includes wavelengths between about 700 nm and about 1 mm. 3. In this subclass, the periodic system used is the I to VIII Group system indicated in the Periodic Table under Note (3) of section C.
N	H10F	Subclass index PHOTOVOLTAICS Individual photovoltaic cells H10F 10/00 Photovoltaic modules or integrated devices H10F 19/00 RADIATION-CONTROLLED DEVICES Individual photoresistors, photodiodes, phototransistors or like devices H10F 30/00 Integrated devices or assemblies of multiple devices H10F 39/00 OTHER DEVICES Radiation-sensitive devices coupled to electric light sources H10F 55/00 MANUFACTURE OR TREATMENT; CONSTRUCTIONAL DETAILS Manufacture or treatment H10F 71/00 Constructional details H10F 77/00 SUBJECT MATTER NOT PROVIDED FOR IN OTHER GROUPS OF THIS SUBCLASS H10F 99/00

N	H10F 10/00	<u>Photovoltaics [2025.01]</u>
N	H10F 10/00	Individual photovoltaic cells, e.g. solar cells (electrolytic light-sensitive devices, e.g. dye-sensitised solar cells, H01G 9/20) [2025.01]
N	H10F 10/10	• having potential barriers [2025.01]
N	H10F 10/11	• • Photovoltaic cells having point contact potential barriers (H10F 10/18 takes precedence) [2025.01]
N	H10F 10/12	• • Photovoltaic cells having only metal-insulator-semiconductor [MIS] potential barriers [2025.01]
N	H10F 10/13	• • Photovoltaic cells having absorbing layers comprising graded bandgaps [2025.01]
N	H10F 10/14	• • Photovoltaic cells having only PN homojunction potential barriers [2025.01]
N	H10F 10/142	• • • comprising multiple PN homojunctions, e.g. tandem cells [2025.01]
N	H10F 10/144	• • • comprising only Group III-V materials, e.g. GaAs, AlGaAs, or InP photovoltaic cells [2025.01]
N	H10F 10/16	• • Photovoltaic cells having only PN heterojunction potential barriers [2025.01]
N	H10F 10/161	• • • comprising multiple PN heterojunctions, e.g. tandem cells [2025.01]
N	H10F 10/162	• • • comprising only Group II-VI materials, e.g. CdS/CdTe photovoltaic cells [2025.01]
N	H10F 10/163	• • • comprising only Group III-V materials, e.g. GaAs/AlGaAs or InP/GaInAs photovoltaic cells [2025.01]
N	H10F 10/164	• • • comprising heterojunctions with Group IV materials, e.g. ITO/Si or GaAs/SiGe photovoltaic cells [2025.01]
N	H10F 10/165	• • • • the heterojunctions being Group IV-IV heterojunctions, e.g. Si/Ge, SiGe/Si or Si/SiC photovoltaic cells [2025.01]
N	H10F 10/166	• • • • • the Group IV-IV heterojunctions being heterojunctions of crystalline and amorphous materials, e.g. silicon heterojunction [SHJ] photovoltaic cells [2025.01]
N	H10F 10/167	• • • comprising Group I-III-VI materials, e.g. CdS/CuInSe ₂ [CIS] heterojunction photovoltaic cells [2025.01]
N	H10F 10/17	• • Photovoltaic cells having only PIN junction potential barriers [2025.01]
N	H10F 10/172	• • • comprising multiple PIN junctions, e.g. tandem cells [2025.01]
N	H10F 10/174	• • • comprising monocrystalline or polycrystalline materials [2025.01]
N	H10F 10/18	• • Photovoltaic cells having only Schottky potential barriers [2025.01]
N	H10F 10/19	• • Photovoltaic cells having multiple potential barriers of different types, e.g. tandem cells having both PN and PIN junctions [2025.01]
N	H10F 19/00	Integrated devices, or assemblies of multiple devices, comprising at least one photovoltaic cell covered by group H10F 10/00, e.g. photovoltaic modules [2025.01]
N	H10F 19/10	• comprising photovoltaic cells in arrays in a single semiconductor substrate, the photovoltaic cells having vertical junctions or V-groove junctions [2025.01]
N	H10F 19/20	• comprising photovoltaic cells in arrays in or on a single semiconductor substrate, the photovoltaic cells having planar junctions (having multiple thin-film photovoltaic cells deposited on the same substrate H10F 19/31) [2025.01]
N	H10F 19/30	• comprising thin-film photovoltaic cells [2025.01]
N	H10F 19/31	• • having multiple laterally adjacent thin-film photovoltaic cells deposited on the same substrate [2025.01]
N	H10F 19/33	• • • Patterning processes to connect the photovoltaic cells, e.g. laser cutting of conductive or active layers [2025.01]
N	H10F 19/35	• • • Structures for the connecting of adjacent photovoltaic cells, e.g. interconnections or insulating spacers [2025.01]
N	H10F 19/37	• • • comprising means for obtaining partial light transmission through the integrated devices, or the assemblies of multiple devices, e.g. partially transparent thin-film photovoltaic modules for windows [2025.01]
N	H10F 19/40	• comprising photovoltaic cells in a mechanically stacked configuration [2025.01]
N	H10F 19/50	• Integrated devices comprising at least one photovoltaic cell and other types of semiconductor or solid-state components (H10F 19/75 takes precedence) [2025.01]
N	H10F 19/70	• comprising bypass diodes (bypass diodes in a junction box H02S 40/34) [2025.01]
N	H10F 19/75	• • the bypass diodes being integrated or directly associated with the photovoltaic cells, e.g. formed in or on the same substrate [2025.01]

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N	H10F 19/80	• Encapsulations or containers for integrated devices, or assemblies of multiple devices, having photovoltaic cells [2025.01]
N	H10F 19/85	• • Protective back sheets [2025.01]
N	H10F 19/90	• Structures for connecting between photovoltaic cells, e.g. interconnections or insulating spacers (between thin-film photovoltaic cells on a single substrate H10F 19/35) [2025.01]
N	H10F 30/00	<u>Radiation-controlled devices [2025.01]</u>
N	H10F 30/00	Individual radiation-sensitive semiconductor devices in which radiation controls the flow of current through the devices, e.g. photodetectors [2025.01]
N	H10F 30/10	• the devices being sensitive to infrared radiation, visible or ultraviolet radiation, and having no potential barriers, e.g. photoresistors [2025.01]
N	H10F 30/20	• the devices having potential barriers, e.g. phototransistors [2025.01]
N	H10F 30/21	• • the devices being sensitive to infrared, visible or ultraviolet radiation [2025.01]
N	H10F 30/22	• • • the devices having only one potential barrier, e.g. photodiodes [2025.01]
N	H10F 30/221	• • • • the potential barrier being a PN homojunction [2025.01]
N	H10F 30/222	• • • • the potential barrier being a PN heterojunction [2025.01]
N	H10F 30/223	• • • • the potential barrier being a PIN barrier [2025.01]
N	H10F 30/225	• • • • the potential barrier working in avalanche mode, e.g. avalanche photodiodes [2025.01]
N	H10F 30/227	• • • • the potential barrier being a Schottky barrier [2025.01]
N	H10F 30/24	• • • the devices having only two potential barriers, e.g. bipolar phototransistors [2025.01]
N	H10F 30/26	• • • the devices having three or more potential barriers, e.g. photothyristors [2025.01]
N	H10F 30/28	• • • the devices being characterised by field-effect operation, e.g. junction field-effect phototransistors [2025.01]
N	H10F 30/282	• • • • Insulated-gate field-effect transistors [IGFET], e.g. MISFET [metal-insulator-semiconductor field-effect transistor] phototransistors [2025.01]
N	H10F 30/29	• • the devices being sensitive to radiation having very short wavelengths, e.g. X-rays, gamma-rays or corpuscular radiation [2025.01]
N	H10F 30/292	• • • Bulk-effect radiation detectors, e.g. Ge-Li compensated PIN gamma-ray detectors [2025.01]
N	H10F 30/295	• • • Surface barrier or shallow PN junction radiation detectors, e.g. surface barrier alpha-particle detectors [2025.01]
N	H10F 30/298	• • • the devices being characterised by field-effect operation, e.g. MIS type detectors [2025.01]
N	H10F 39/00	Integrated devices, or assemblies of multiple devices, comprising at least one element covered by group H10F 30/00, e.g. radiation detectors comprising photodiode arrays [2025.01]
N	H10F 39/10	• Integrated devices [2025.01]
N	H10F 39/12	• • Image sensors [2025.01]
N	H10F 39/15	• • • Charge-coupled device [CCD] image sensors [2025.01]
N	H10F 39/18	• • • Complementary metal-oxide-semiconductor [CMOS] image sensors; Photodiode array image sensors [2025.01]
N	H10F 39/90	• Assemblies of multiple devices [2025.01]
N	H10F 39/95	• • comprising at least one integrated device covered by group H10F 39/10, e.g. comprising integrated image sensors [2025.01]
N	H10F 55/00	<u>Other devices [2025.01]</u>
N	H10F 55/00	Radiation-sensitive semiconductor devices covered by groups H10F 10/00, H10F 19/00 or H10F 30/00 being structurally associated with electric light sources and electrically or optically coupled thereto [2025.01]
N	H10F 55/10	• wherein the radiation-sensitive semiconductor devices control the electric light source, e.g. image converters, image amplifiers or image storage devices [2025.01]
N	H10F 55/15	• • wherein the radiation-sensitive devices and the electric light source are all semiconductor devices [2025.01]
N	H10F 55/155	• • • formed in, or on, a common substrate [2025.01]

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N	H10F 55/20	• wherein the electric light source controls the radiation-sensitive semiconductor devices, e.g. optocouplers [2025.01]
N	H10F 55/25	•• wherein the radiation-sensitive devices and the electric light source are all semiconductor devices [2025.01]
N	H10F 55/255	••• formed in, or on, a common substrate [2025.01]
N	H10F 71/00	<u>Manufacture or treatment; Constructional details [2025.01]</u>
N	H10F 71/00	Manufacture or treatment of devices covered by this subclass (patterning processes to connect thin photovoltaic cells in integrated devices, or assemblies of multiple devices, having photovoltaic cells H10F 19/33; manufacture or treatment of encapsulations or containers for integrated devices, or assemblies of multiple devices, having photovoltaic cells H10F 19/80; manufacture or treatment of integrated devices, or assemblies of multiple devices, comprising at least one element in which radiation controls the flow of current H10F 39/00) [2025.01]
N	H10F 71/10	• the devices comprising amorphous semiconductor material [2025.01]
N	H10F 77/00	Note(s) [2025.01] When classifying in this group, the type of device itself, when it is determined to be novel and non-obvious, should be classified in groups H10F 10/00, H10F 19/00, H10F 30/00 or H10F 55/00.
N	H10F 77/00	Constructional details of devices covered by this subclass (constructional details of integrated devices, or assemblies of multiple devices, comprising at least one element in which radiation controls the flow of current H10F 39/00) [2025.01]
N	H10F 77/10	• Semiconductor bodies [2025.01]
N	H10F 77/12	Note(s) [2025.01] When classifying in this group, constituents of a material are considered irrespective of any dopants or other impurities.
N	H10F 77/12	•• Active materials [2025.01]
N	H10F 77/121	••• comprising only selenium or only tellurium [2025.01]
N	H10F 77/122	••• comprising only Group IV materials [2025.01]
N	H10F 77/1223	•••• characterised by the dopants [2025.01]
N	H10F 77/1226	•••• comprising multiple Group IV elements, e.g. SiC [2025.01]
N	H10F 77/123	••• comprising only Group II-VI materials, e.g. CdS, ZnS or HgCdTe [2025.01]
N	H10F 77/124	•• comprising only Group III-V materials, e.g. GaAs [2025.01]
N	H10F 77/14	•• Shape of semiconductor bodies; Shapes, relative sizes or dispositions of semiconductor regions within semiconductor bodies [2025.01]
N	H10F 77/16	•• Material structures, e.g. crystalline structures, film structures or crystal plane orientations [2025.01]
N	H10F 77/162	••• Non-monocrystalline materials, e.g. semiconductor particles embedded in insulating materials (H10F 77/169 takes precedence) [2025.01]
N	H10F 77/164	•••• Polycrystalline semiconductors [2025.01]
N	H10F 77/166	•••• Amorphous semiconductors [2025.01]
N	H10F 77/169	••• Thin semiconductor films on metallic or insulating substrates [2025.01]
N	H10F 77/20	• Electrodes [2025.01]
N	H10F 77/30	• Coatings (arrangements for preventing damage to photovoltaic cells caused by corpuscular radiation H10F 77/80) [2025.01]
N	H10F 77/40	• Optical elements or arrangements (surface textures H10F 77/70) [2025.01]
N	H10F 77/42	•• directly associated or integrated with photovoltaic cells, e.g. light-reflecting means or light-concentrating means [2025.01]
N	H10F 77/45	••• Wavelength conversion means, e.g. by using luminescent material, fluorescent concentrators or up-conversion arrangements [2025.01]
N	H10F 77/48	••• Back surface reflectors [BSR] [2025.01]
N	H10F 77/50	• Encapsulations or containers (for photovoltaic modules H10F 19/80) [2025.01]
N	H10F 77/60	• Arrangements for cooling, heating, ventilating or compensating for temperature fluctuations [2025.01]

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N	H10F 77/63	• • Arrangements for cooling directly associated or integrated with photovoltaic cells, e.g. heat sinks directly associated with the photovoltaic cells or integrated Peltier elements for active cooling [2025.01]
N	H10F 77/67	• • • including means to utilise heat energy directly associated with the photovoltaic cells, e.g. integrated Seebeck elements [2025.01]
N	H10F 77/70	• Surface textures, e.g. pyramid structures [2025.01]
N	H10F 77/80	• Arrangements for preventing damage to photovoltaic cells caused by corpuscular radiation, e.g. for space applications [2025.01]
N	H10F 77/90	• Energy storage means directly associated or integrated with photovoltaic cells, e.g. capacitors integrated with photovoltaic cells [2025.01]
N	H10F 99/00	Subject matter not provided for in other groups of this subclass [2025.01]
N	H10H	INORGANIC LIGHT-EMITTING SEMICONDUCTOR DEVICES HAVING POTENTIAL BARRIERS [2025.01]
N	H10H	Note(s) [2025.01] <ol style="list-style-type: none"> 1. This subclass <u>covers</u> inorganic light-emitting semiconductor devices that emit visible, infrared [IR] or ultraviolet [UV] light. This includes light-emitting diodes [LED] and superluminescent diodes [SLD]. 2. This subclass <u>does not cover</u> semiconductor lasers, which are covered by group H01S 5/00. 3. In this subclass, the periodic system used is the I to VIII group system indicated in the Periodic Table under Note (3) of section C.
N	H10H 20/00	Individual inorganic light-emitting semiconductor devices having potential barriers, e.g. light-emitting diodes [LED] [2025.01]
N	H10H 20/01	• Manufacture or treatment [2025.01]
N	H10H 20/80	• Constructional details [2025.01]
N	H10H 20/81	• • Bodies [2025.01]
N	H10H 20/811	• • • having quantum effect structures or superlattices, e.g. tunnel junctions [2025.01]
N	H10H 20/812	• • • • within the light-emitting regions, e.g. having quantum confinement structures [2025.01]
N	H10H 20/813	• • • having a plurality of light-emitting regions, e.g. multi-junction LEDs or light-emitting devices having photoluminescent regions within the bodies [2025.01]
N	H10H 20/814	• • • having reflecting means, e.g. semiconductor Bragg reflectors [2025.01]
N	H10H 20/815	• • • having stress relaxation structures, e.g. buffer layers [2025.01]
N	H10H 20/816	• • • having carrier transport control structures, e.g. highly-doped semiconductor layers or current-blocking structures [2025.01]
N	H10H 20/817	• • • characterised by the crystal structures or orientations, e.g. polycrystalline, amorphous or porous [2025.01]
N	H10H 20/818	Note(s) [2025.01] When classifying in this group, classification is also made in group H10H 20/822 in order to identify the chemical composition of the light-emitting region.
N	H10H 20/818	• • • • within the light-emitting regions [2025.01]
N	H10H 20/819	• • • characterised by their shape, e.g. curved or truncated substrates [2025.01]
N	H10H 20/82	• • • • Roughened surfaces, e.g. at the interface between epitaxial layers [2025.01]
N	H10H 20/821	• • • • of the light-emitting regions, e.g. non-planar junctions [2025.01]
N	H10H 20/822	Note(s) [2025.01] When classifying in this group, constituents of a material are considered irrespective of any dopants or other impurities.
N	H10H 20/822	• • • Materials of the light-emitting regions [2025.01]
N	H10H 20/823	• • • • comprising only Group II-VI materials, e.g. ZnO [2025.01]
N	H10H 20/824	• • • • comprising only Group III-V materials, e.g. GaP [2025.01]
N	H10H 20/825	• • • • • containing nitrogen, e.g. GaN [2025.01]
N	H10H 20/826	• • • • comprising only Group IV materials [2025.01]
N	H10H 20/83	• • Electrodes [2025.01]
N	H10H 20/831	• • • characterised by their shape [2025.01]
N	H10H 20/832	• • • characterised by their material [2025.01]

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N	H10H 20/833	•••• Transparent materials [2025.01]
N	H10H 20/84	•• Coatings, e.g. passivation layers or antireflective coatings [2025.01]
N	H10H 20/841	••• Reflective coatings, e.g. dielectric Bragg reflectors [2025.01]
N	H10H 20/85	•• Packages [2025.01]
N	H10H 20/851	••• Wavelength conversion means [2025.01]
N	H10H 20/852	••• Encapsulations [2025.01]
N	H10H 20/853	•••• characterised by their shape [2025.01]
N	H10H 20/854	•••• characterised by their material, e.g. epoxy or silicone resins [2025.01]
N	H10H 20/855	••• Optical field-shaping means, e.g. lenses [2025.01]
N	H10H 20/856	•••• Reflecting means [2025.01]
N	H10H 20/857	••• Interconnections, e.g. lead-frames, bond wires or solder balls [2025.01]
N	H10H 20/858	••• Means for heat extraction or cooling [2025.01]
N	H10H 29/00	Integrated devices, or assemblies of multiple devices, comprising at least one light-emitting semiconductor element covered by group H10H 20/00 [2025.01]
N	H10H 29/01	• Manufacture or treatment [2025.01]
N	H10H 29/02	•• using pick-and-place processes [2025.01]
N	H10H 29/03	•• using mass transfer of LEDs, e.g. by using liquid suspensions [2025.01]
N	H10H 29/10	• Integrated devices comprising at least one light-emitting semiconductor component covered by group H10H 20/00 (active-matrix LED displays H10H 29/30) [2025.01]
N	H10H 29/14	•• comprising multiple light-emitting semiconductor components [2025.01]
N	H10H 29/20	• Assemblies of multiple devices comprising at least one light-emitting semiconductor device covered by group H10H 20/00 (active-matrix LED displays H10H 29/30) [2025.01]
N	H10H 29/24	•• comprising multiple light-emitting semiconductor devices [2025.01]
N	H10H 29/30	Note(s) [2025.01] This group <u>covers</u> active-matrix displays where the emphasis of the invention concerns the LEDs, the layers closely related to the LEDs or constructional details closely related to the LEDs, e.g. interconnections between the LEDs or their encapsulations.
N	H10H 29/30	• Active-matrix LED displays [2025.01]
N	H10H 29/32	•• characterised by the geometry or arrangement of elements within a subpixel, e.g. arrangement of the transistor within its RGB subpixel [2025.01]
N	H10H 29/34	•• characterised by the geometry or arrangement of subpixels within a pixel, e.g. relative disposition of the RGB subpixels [2025.01]
N	H10H 29/37	•• Pixel-defining structures, e.g. banks between the LEDs [2025.01]
N	H10H 29/39	•• Connection of the pixel electrodes to the driving transistors [2025.01]
N	H10H 29/41	•• Insulating layers formed between the driving transistors and the LEDs [2025.01]
N	H10H 29/45	•• comprising two substrates, each having active devices thereon, e.g. displays comprising LED arrays and driving circuitry on different substrates [2025.01]
N	H10H 29/49	•• Interconnections, e.g. wiring lines or terminals (connection of the pixel electrodes to the driving transistors H10H 29/39) [2025.01]
N	H10H 29/80	Note(s) [2025.01] Classification is made in group H10H 29/80 when the constructional detail is relevant to integrated devices or assemblies comprising multiple devices. When the constructional detail is relevant to individual devices, then classification is made in group H10H 20/80.
N	H10H 29/80	• Constructional details [2025.01]
N	H10H 29/85	•• Packages [2025.01]
N	H10H 29/851	••• Wavelength conversion means [2025.01]
N	H10H 29/852	••• Encapsulations [2025.01]
N	H10H 29/853	•••• characterised by their shape [2025.01]
N	H10H 29/854	•••• characterised by their material, e.g. epoxy or silicone resins [2025.01]
N	H10H 29/855	••• Optical field-shaping means, e.g. lenses [2025.01]
N	H10H 29/856	•••• Reflecting means [2025.01]
N	H10H 99/00	Subject matter not provided for in other groups of this subclass [2025.01]
	H10K	

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M	H10K	<div>Note(s) [2023.01]<div>1. This subclass <u>covers</u>:<ul style="list-style-type: none">individual organic electric solid-state devices, i.e. electric solid-state devices comprising organic material in the active part;integrated devices, or assemblies of multiple devices, comprising such elements.</div><div>2. This subclass <u>does not cover</u>:<ul style="list-style-type: none">organic electronic memory devices, which are covered by subclass H10B;organic thermoelectric devices, organic thermomagnetic devices, organic piezoelectric devices, organic electrostrictive devices, organic magnetostrictive devices, organic galvanomagnetic devices, organic Hall-effect devices, organic superconducting devices or organic solid-state devices having no potential barriers, and specially adapted for rectifying, amplifying, oscillating or switching, which are covered by subclass H10N;organic resistors having no potential barriers and not specially adapted for integrated devices, which are covered by subclass H01C;organic capacitors having no potential barriers and not specially adapted for integrated devices, which are covered by subclass H01G.</div><div>3. In this subclass, the periodic system used is the I to VIII group system indicated in the Periodic Table under Note (3) of section C.</div><div>4. In this subclass, it is desirable to add the indexing codes of groups H10K 101/00-H10K 102/00.</div></div>
H10N		
M	H10N	<div>Note(s) [2024.01]<div>In this subclass, the periodic system used is the I to VIII group system indicated in the Periodic Table under Note (3) of section C.</div></div>
M	H10N 10/82	<div><ul style="list-style-type: none">• Connection of interconnections <i>Interconnections</i> [2023.01]</div>
M	H10N 50/85	<div><ul style="list-style-type: none">• Magnetic <i>Materials of the</i> active materials <i>region</i> [2023.01]</div>
M	H10N 52/85	<div><ul style="list-style-type: none">• Magnetic <i>Materials of the</i> active materials <i>region</i> [2023.01]</div>