

CPC COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

SHAPING

B23 MACHINE TOOLS; METAL-WORKING NOT OTHERWISE PROVIDED FOR (punching, perforating, making articles by processing sheet metal, tubes, or profiles [B21D](#); wire-working [B21F](#); making pins, needles, or nails [B21G](#); making chains [B21L](#); grinding [B24](#))
(NOTES omitted)

B23C MILLING (broaching [B23D](#); broach-milling in making gears [B23F](#); arrangement for copying or controlling [B23Q](#))

1/00	Milling machines not designed for particular work or special operations	3/053 {having means for guiding the tool carrying spindle}
1/002	. {Gantry-type milling machines}	3/055 {for engines}
1/005	. {with a tool moving in a closed path around the workpiece}	3/056 {for taps or valves}
1/007	. {movable milling machines, e.g. on rails}	3/058	. . . {Reconditioning of valves}
1/02	. with one horizontal working-spindle	3/06	. Milling crankshafts
1/025	. . with working-spindle movable in a fixed position	3/08	. Milling cams, camshafts, or the like
1/027	. . with working-spindle movable in a vertical direction	3/10	. Relief milling (lathes or turning devices for relieving B23B5/42)
1/04	. with a plurality of horizontal working-spindles	3/12	. Trimming or finishing edges, e.g. deburring welded corners
1/045	. . {Opposed - spindle machines}	3/122	. . {of pipes or cylinders}
1/06	. with one vertical working-spindle	3/124	. . . {internally}
1/08	. with a plurality of vertical working-spindles	3/126	. . {Portable devices or machines for chamfering edges}
1/10	. with both horizontal and vertical working-spindles	3/128	. . {Trimming or finishing edges of doors and windows}
1/12	. with spindle adjustable to different angles, e.g. either horizontal or vertical	3/13	. Surface milling of plates, sheets or strips
1/14	. with rotary work-carrying table (work tables for machine tools in general B23Q 1/00)	3/14	. Scrubbing or peeling ingots or similar workpieces
1/16	. specially designed for control by copying devices {(not used; see B23Q 35/00)}	3/16	. Working surfaces curved in two directions
1/18	. . for milling while revolving the work	3/18	. . for shaping screw-propellers, turbine blades, or impellers
1/20	. Portable devices or machines (details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed B25F 5/00); Hand-driven devices or machines	3/20	. . for shaping dies
3/00	Milling particular work; Special milling operations; Machines therefor (milling gear-teeth B23F , {heat assisted machining B23P 25/00 })	3/22	. Forming overlapped joints, e.g. of the ends of piston-rings
3/002	. {Milling elongated workpieces}	3/24	. Making square or polygonal ends on workpieces, e.g. key studs on tools
3/005	. . {Rails}	3/26	. Making square or polygonal holes in workpieces, e.g. key holes in tools
3/007	. {Milling end surfaces of nuts or tubes}	3/28	. Grooving workpieces (tread-cutting by milling B23G 1/32)
3/02	. Milling surfaces of revolution (B23C 3/06 , B23C 3/08 take precedence)	3/30	. . Milling straight grooves, e.g. keyways
3/023	. . {Milling spherical surfaces}	3/305	. . . {in which more than one milling tool is used simultaneously, e.g. for sheet material}
3/026	. . . {Milling balls}	3/32	. . Milling helical grooves, e.g. in making twist-drills
3/04	. . while revolving the work	3/34	. . Milling grooves of other forms, e.g. circumferential
3/05	. . Finishing valves or valve seats {(machines for grinding seat surfaces, e.g. in valve housings, B24B 15/00)}	3/35	. . Milling grooves in keys
3/051	. . . {Reconditioning of valve seats}	3/355	. . . {Holders for the template keys}
		3/36	. Milling milling-cutters (B23C 3/28 takes precedence)
		5/00	Milling-cutters (for cutting gear-teeth B23F 21/12)
		5/003	. {with vibration suppressing means}

- 5/006 . {Details of the milling cutter body}
- 5/02 . characterised by the shape of the cutter
- 5/04 . . Plain cutters, i.e. having essentially a cylindrical or tapered cutting surface of substantial length (B23C 5/10 takes precedence)
- 5/06 . . Face-milling cutters, i.e. having only or primarily a substantially flat cutting surface
- 5/08 . . Disc-type cutters
- 5/10 . . Shank-type cutters, i.e. with an integral shaft
- 5/1009 . . . {Ball nose end mills}
- 5/1018 {with permanently fixed cutting inserts}
- 5/1027 {with one or more removable cutting inserts}
- 5/1036 {having a single cutting insert, the cutting edges of which subtend 180 degrees}
- 5/1045 {having a cutting insert, the cutting edge of which subtends substantially 90 degrees}
- 5/1054 . . . {T slot cutters}
- 5/1063 {with permanently fixed cutting inserts}
- 5/1072 {with removable cutting inserts}
- 5/1081 . . . {with permanently fixed cutting inserts (B23C 5/1054 and B23C 5/1081 take precedence)}
- 5/109 . . . {with removable cutting inserts}
- 5/12 . . Cutters specially designed for producing particular profiles (B23C 5/10 takes precedence)
- 5/14 . . . essentially comprising curves (B23C 5/1009 takes precedence)}
- 5/16 . characterised by physical features other than shape
- 5/165 . . {with chipbreaking or chipdividing equipment (for turning machines B23B 25/02; turning tools B23B 27/00; drilling machines B23B 47/34)}
- 5/18 . . with permanently-fixed cutter-bits or teeth
- 5/20 . . with removable cutter bits or teeth {or cutting inserts}
- 5/202 . . . {Special by shaped plate-like cutting inserts, i.e. length greater than or equal to width, width greater than or equal to thickness (with removable plate-like turning cutting inserts of special form B23B 27/141)}
- 5/205 {having chip-breakers}
- 5/207 {having a special shape}
- 5/22 . . . Securing arrangements for bits or teeth {or cutting inserts}
- 5/2204 {with cutting inserts clamped against the walls of the recess in the shank by a clamping member acting upon the wall of a hole in the insert}
- 5/2208 {for plate-like cutting inserts (B23C 5/2226, B23C 5/223, B23C 5/2234 take precedence)}
- 5/2213 {Special by shaped cutting inserts}
- 5/2217 {having chip-breakers}
- 5/2221 {having a special shape}
- 5/2226 {for plate-like cutting inserts fitted on an intermediate carrier}
- 5/223 {for plate-like cutting inserts fitted on a shank, fixed in the cutter body}
- 5/2234 {for plate-like cutting inserts fitted on a ring or ring segment}
- 5/2239 {with cutting inserts clamped by a clamping member acting almost perpendicular on the cutting face}
- 5/2243 {for plate-like cutting inserts (B23C 5/2252, B23C 5/2256, B23C 5/226 take precedence)}
- 5/2247 {having a special shape}
- 5/2252 {for plate-like cutting inserts fitted on an intermediate carrier}
- 5/2256 {for plate-like cutting inserts fitted on a shank, fixed in the cutter body}
- 5/226 {for plate-like cutting inserts fitted on a ring or ring segment}
- 5/2265 {by means of a wedge}
- 5/2269 {for plate-like cutting inserts (B23C 5/2278, B23C 5/2286, B23C 5/2291 take precedence)}
- 5/2273 {having a special shape}
- 5/2278 {for plate-like cutting inserts fitted on an intermediate carrier}
- 5/2282 {having a special shape}
- 5/2286 {for plate-like cutting inserts fitted on a shank, fixed in the cutter body}
- 5/2291 {for plate-like cutting inserts fitted on a ring or ring segment}
- 5/2295 {the cutting elements being clamped simultaneously}
- 5/24 adjustable
- 5/2403 {with cutting inserts clamped against the walls of the recess in the shank by a clamping member acting upon the wall of a hole in the insert}
- 5/2406 {for plate-like cutting inserts (B23C 5/241, B23C 5/2413, B23C 5/2417 take precedence)}
- 5/241 {for plate-like cutting inserts fitted on an intermediate carrier}
- 5/2413 {for plate-like cutting inserts fitted on a shank, fixed in the cutter body}
- 5/2417 {for plate-like cutting inserts fitted on a ring or ring segment}
- 5/242 {with cutting inserts clamped by a clamping member acting almost perpendicularly on the cutting face}
- 5/2424 {for plate-like cutting inserts (B23C 5/2427, B23C 5/2431, B23C 5/2434 take precedence)}
- 5/2427 {for plate-like cutting inserts fitted on an intermediate carrier}
- 5/2431 {for plate-like cutting inserts fitted on a shank, fixed in the cutter body}
- 5/2434 {for plate-like cutting inserts fitted on a ring or ring segment}
- 5/2437 {clamping by means of a wedge}
- 5/2441 {for plate-like cutting inserts (B23C 5/2444, B23C 5/2448, B23C 5/2451 take precedence)}
- 5/2444 {for plate-like cutting inserts fitted on an intermediate carrier}
- 5/2448 {for plate-like cutting inserts fitted on a shank, fixed in the cutter body}
- 5/2451 {for plate-like cutting inserts fitted on a ring or ring segment}
- 5/2455 {The adjusting means being serrated teeth on the cutter and the cutting insert}
- 5/2458 {the cutting elements being clamped or adjusted simultaneously}

- 5/2462 {the adjusting means being oblique surfaces}
- 5/2465 {the adjusting means being notches}
- 5/2468 {the adjusting means being serrations}
- 5/2472 {the adjusting means being screws}
- 5/2475 {the adjusting means being distance elements, e.g. shims or washers}
- 5/2479 {the adjusting means being eccentrics}
- 5/2482 {the adjusting means being hydraulic cylinders}
- 5/2486 {where the adjustment is made by balancing the toolholders}
- 5/2489 {where the adjustment is made by changing the inclination of the inserts}
- 5/2493 {where the adjustment is made by deforming the seating surfaces}
- 5/2496 {where the adjusting means are gears and racks}
- 5/26 Securing milling cutters to the driving spindle
- 5/265 {by fluid pressure means}
- 5/28 Features relating to lubricating or cooling
- 7/00** **Milling devices able to be attached to a machine tool, whether or not replacing an operative portion of the machine tool**
- 7/02 to lathes
- 7/04 to planing or slotting machines
- 9/00** **Details or accessories so far as specially adapted to milling machines or cutter (drives, control devices, or accessories, in general [B23Q](#))**
- 9/005 {milling heads}
- 2200/00** **Details of milling cutting inserts**
- 2200/04 Overall shape
- 2200/0405 Hexagonal
- 2200/0411 irregular
- 2200/0416 Irregular
- 2200/0422 Octagonal
- 2200/0427 rounded
- 2200/0433 Parallelogram
- 2200/0438 rounded
- 2200/0444 Pentagonal
- 2200/045 Round
- 2200/0455 Square
- 2200/0461 rounded
- 2200/0466 Star form
- 2200/0472 Trapezium
- 2200/0477 Triangular
- 2200/0483 rounded
- 2200/0488 Heptagonal
- 2200/0494 Rectangular
- 2200/08 Rake or top surfaces
- 2200/081 with projections ([chip breaking projections in general \[B23C 2200/323\]\(#\)](#))
- 2200/082 with an elevated clamping surface
- 2200/083 curved
- 2200/085 discontinuous
- 2200/086 with one or more grooves
- 2200/087 for chip-breaking ([with chip-breaking grooves in general \[B23C 2200/326\]\(#\)](#))
- 2200/088 spherical
- 2200/12 Side or flank surfaces
- 2200/121 with projections
- 2200/123 curved
- 2200/125 discontinuous
- 2200/126 stepped
- 2200/128 with one or more grooves
- 2200/16 Supporting or bottom surfaces
- 2200/161 with projections
- 2200/162 curved
- 2200/164 discontinuous
- 2200/165 with one or more grooves
- 2200/167 star form
- 2200/168 with features related to indexing ([with lines to permit indexing of round inserts \[B23C 2200/363\]\(#\)](#))
- 2200/20 Top or side views of the cutting edge
- 2200/201 Details of the nose radius and immediately surrounding areas
- 2200/203 Curved cutting edges
- 2200/205 Discontinuous cutting edges
- 2200/206 Cutting edges having a wave-form
- 2200/208 Wiper, i.e. an auxiliary cutting edge to improve surface finish
- 2200/24 Cross section of the cutting edge
- 2200/243 bevelled or chamfered
- 2200/246 rounded
- 2200/28 Angles
- 2200/283 Negative cutting angles
- 2200/286 Positive cutting angles
- 2200/32 Chip breaking or chip evacuation
- 2200/323 by chip-breaking projections ([with projection on top surface \[B23C 2200/081\]\(#\)](#))
- 2200/326 by chip breaking grooves ([with grooves on top surface for chip-breaking \[B23C 2200/087\]\(#\)](#))
- 2200/36 Other features of the milling insert not covered by [B23C 2200/04 - \[B23C 2200/32\]\(#\)](#)
- 2200/361 Fixation holes
- 2200/362 Having two fixation holes
- 2200/363 Lines to permit indexing of round insert ([bottom surface with features relating to indexing \[B23C 2200/168\]\(#\)](#))
- 2200/365 Lands, i.e. the outer peripheral section of rake faces
- 2200/366 Variable
- 2200/367 Mounted tangentially, i.e. where the rake face is not the face with largest area
- 2200/368 Roughened surfaces
- 2210/00** **Details of milling cutters**
- 2210/02 Connections between the shanks and detachable cutting heads
- 2210/03 Cutting heads comprised of different material than the shank irrespective of whether the head is detachable from the shank
- 2210/04 Angles
- 2210/0407 Cutting angles
- 2210/0414 different
- 2210/0421 negative
- 2210/0428 axial rake angle
- 2210/0435 radial rake angle
- 2210/0442 positive
- 2210/045 axial rake angle
- 2210/0457 radial rake angle
- 2210/0464 neutral
- 2210/0471 axial rake angle
- 2210/0478 radial rake angle

- 2210/0485 . . Helix angles
- 2210/0492 . . . different
- 2210/08 . Side or top views of the cutting edge
- 2210/082 . . Details of the corner region between axial and radial cutting edges
- 2210/084 . . Curved cutting edges
- 2210/086 . . Discontinuous or interrupted cutting edges
- 2210/088 . . Cutting edges with a wave form
- 2210/12 . Cross section of the cutting edge
- 2210/123 . . Bevelled cutting edges
- 2210/126 . . Rounded cutting edges
- 2210/16 . Fixation of inserts or cutting bits in the tool ([details of connections B23C 2240/00](#))
- 2210/161 . . Elastically deformable clamping members
- 2210/163 . . Indexing
- 2210/165 . . Fixation bolts
- 2210/166 . . Shims
- 2210/168 . . Seats for cutting inserts, supports for replacable cutting bits
- 2210/20 . Number of cutting edges
- 2210/201 . . one
- 2210/202 . . three
- 2210/203 . . four
- 2210/204 . . five
- 2210/205 . . six
- 2210/206 . . seven
- 2210/207 . . eight
- 2210/208 . . ten
- 2210/209 . . twelve
- 2210/24 . Overall form of the milling cutter ([angles B23C 2210/04](#); [top or side views of cutting edges B23C 2210/08](#); [cross sections of cutting edges B23C 2210/12](#))
- 2210/241 . . Cross sections of the whole milling cutter
- 2210/242 . . Form tools, i.e. cutting edges profiles to generate a particular form
- 2210/243 . . Cutting parts at both ends
- 2210/244 . . Milling cutters comprised of disc-shaped modules or multiple disc-like cutters
- 2210/245 . . Milling cutters comprising a disc having a wave form
- 2210/246 . . Milling cutters comprising a hole or hollow in the end face or between the cutting edges
- 2210/247 . . Stepped milling cutters
- 2210/248 . . . with enlarged cutting heads
- 2210/28 . Arrangement of teeth
- 2210/282 . . Unequal angles between the cutting edges, i.e. cutting edges unequally spaced in the circumferential direction
- 2210/285 . . Cutting edges arranged at different diameters
- 2210/287 . . Cutting edges arranged at different axial positions or having different lengths in the axial direction
- 2210/32 . Details of teeth
- 2210/321 . . Lands, i.e. the area on the rake face in the immediate vicinity of the cutting edge
- 2210/323 . . Separate teeth, i.e. discrete profiled teeth similar to those of a hob
- 2210/325 . . Different teeth, i.e. one tooth having a different configuration to a tooth on the opposite side of the flute
- 2210/326 . . File like cutting teeth, e.g. the teeth of cutting burrs
- 2210/328 . . Treated cutting edges
- 2210/40 . Flutes, i.e. chip conveying grooves
- 2210/402 . . of variable depth
- 2210/405 . . . having decreasing depth in the direction of the shank from the tip of the tool
- 2210/407 . . . having increasing depth in the direction of the shank from the tip of the tool
- 2210/44 . Margins, i.e. the part of the peripheral surface immediately adjacent the cutting edge
- 2210/445 . . variable
- 2210/48 . Chip breakers
- 2210/483 . . Chip breaking projections
- 2210/486 . . Chip breaking grooves or depressions
- 2210/50 . Cutting inserts
- 2210/503 . . mounted internally on the cutter
- 2210/506 . . mounted so as to be able to rotate freely
- 2210/52 . Bushings
- 2210/54 . Configuration of the cutting part
- 2210/56 . Supporting or guiding sections located on the periphery of the tool
- 2210/58 . Brushes
- 2210/60 . Axis of the cutter inclined with respect to the axis of rotation
- 2210/62 . Selectable cutting diameters
- 2210/64 . End milling cutters having a groove in the end cutting face, the groove not being present so as to provide a cutting edge
- 2210/66 . Markings, i.e. symbols or indicating marks
- 2210/68 . Reground to nominal diameter by removal of material from both the front of the insert and the back of insert carrier
- 2210/70 . Pilots
- 2210/72 . Rotatable in both directions
- 2210/74 . Slits
- 2215/00 Details of workpieces**
- 2215/04 . Aircraft components
- 2215/045 . . Propellers
- 2215/08 . Automotive parts ([B23C 2215/16](#), [B23C 2215/20](#) and [B23C 2215/24](#) take precedence)
- 2215/085 . . Wheels
- 2215/12 . Propellers for boats
- 2215/16 . Camshafts
- 2215/20 . Crankshafts
- 2215/24 . Components of internal combustion engines
- 2215/242 . . Combustion chambers
- 2215/245 . . Connecting rods
- 2215/247 . . Components of diesel engines
- 2215/28 . Nipples
- 2215/32 . Railway tracks
- 2215/36 . Railway wheels
- 2215/40 . Spectacles
- 2215/44 . Turbine blades
- 2215/48 . Kaplan turbines
- 2215/52 . Axial turbine wheels
- 2215/56 . Radial turbine wheels
- 2215/60 . Valve guides in combination with the neighbouring valve seat
- 2215/64 . Well pipe windows, i.e. windows in tubings or casings for wells
- 2220/00 Details of milling processes**
- 2220/04 . Milling with the axis of the cutter inclined to the surface being machined

- 2220/08 . Milling with the axis of the tool perpendicular to the workpiece axis
- 2220/12 . Cutting off, i.e. producing multiple discrete components from a single piece of material
- 2220/16 . Chamferring
- 2220/20 . Deburring
- 2220/24 . Production of elliptical holes
- 2220/28 . Finishing ([roughing and finishing B23C 2220/605](#))
- 2220/32 . Five-axis
- 2220/36 . Production of grooves
- 2220/363 . . Spiral grooves
- 2220/366 . . Turbine blade grooves
- 2220/40 . Using guiding means
- 2220/44 . High speed milling
- 2220/48 . Methods of milling not otherwise provided for
- 2220/52 . Orbital drilling, i.e. use of a milling cutter moved in a spiral path to produce a hole
- 2220/56 . Plunge milling
- 2220/60 . Roughing
- 2220/605 . . Roughing and finishing
- 2220/64 . Using an endmill, i.e. a shaft milling cutter, to generate profile of a crankshaft or camshaft
- 2220/68 . Whirling
- 2222/00 Materials of tools or workpieces composed of metals, alloys or metal matrices**
- 2222/04 . Aluminium
- 2222/06 . Babbitt metal
- 2222/12 . Brass
- 2222/14 . Cast iron
- 2222/16 . Cermet
- 2222/28 . Details of hard metal, i.e. cemented carbide
- 2222/32 . Details of high speed steel ([steel B23C 2222/84](#))
- 2222/52 . Magnesium
- 2222/61 . Metal matrices with metallic or non-metallic particles or fibres
- 2222/64 . Nickel
- 2222/76 . Silver
- 2222/78 . Sodium
- 2222/84 . Steel ([details of high speed steel B23C 2222/32](#))
- 2222/88 . Titanium
- 2222/98 . Zinc
- 2224/00 Materials of tools or workpieces composed of a compound including a metal**
- 2224/04 . Aluminium oxide
- 2224/13 . Chromium nitride
- 2224/14 . Chromium aluminium nitride (CrAlN)
- 2224/20 . Tantalum carbide
- 2224/22 . Titanium aluminium carbide nitride (TiAlCN)
- 2224/24 . Titanium aluminium nitride (TiAlN)
- 2224/28 . Titanium carbide
- 2224/32 . Titanium carbide nitride (TiCN)
- 2224/36 . Titanium nitride
- 2224/56 . Vanadium aluminium nitride (VAlN)
- 2226/00 Materials of tools or workpieces not comprising a metal**
- 2226/12 . Boron nitride
- 2226/125 . . cubic [CBN]
- 2226/18 . Ceramic
- 2226/27 . Composites, e.g. fibre reinforced composites
- 2226/31 . Diamond
- 2226/315 . . polycrystalline [PCD]
- 2226/33 . Elastomers, e.g. rubber
- 2226/37 . Fibreglass
- 2226/41 . Gypsum
- 2226/42 . Gem, i.e. precious stone
- 2226/45 . Glass ([milling glass B28D 1/18](#))
- 2226/54 . Paper
- 2226/61 . Plastics not otherwise provided for, e.g. nylon
- 2226/62 . Polystyrene foam
- 2226/72 . Silicon carbide
- 2226/73 . Silicon nitride
- 2226/75 . Stone, rock or concrete ([milling stone or like materials B28D 1/18](#))
- 2228/00 Properties of materials of tools or workpieces, materials of tools or workpieces applied in a specific manner**
- 2228/04 . applied by chemical vapour deposition [CVD]
- 2228/08 . applied by physical vapour deposition [PVD]
- 2228/10 . Coating
- 2228/12 . Cast, i.e. in the form of a casting
- 2228/14 . Flexible
- 2228/24 . Hard, i.e. after being hardened
- 2228/25 . Honeycomb
- 2228/26 . Hot
- 2228/49 . Sintered
- 2228/50 . Soft metal
- 2230/00 Details of chip evacuation ([chip evacuation in cutting inserts B23C 2200/32](#))**
- 2230/04 . Transport of chips
- 2230/045 . . to the middle of the cutter or in the middle of a hollow cutter
- 2230/08 . Using suction
- 2235/00 Details of milling keys**
- 2235/04 . Keys with blind holes
- 2235/08 . Brushes
- 2235/12 . Using a database to store details of the key, the information in the database being used for the generation of the profile of the key
- 2235/16 . Dial indicators
- 2235/21 . Calibration by electronic detection of position of probes and cutting wheels
- 2235/24 . Electronic sensors
- 2235/28 . Key blanks
- 2235/32 . Measurement systems
- 2235/36 . Ring keys
- 2235/41 . Scanning systems
- 2235/44 . Templates for the simulation of keys
- 2235/48 . Tracers, probes or styli
- 2240/00 Details of connections of tools or workpieces ([fixation of the cutting insert or bit in the tool B23C 2210/16](#))**
- 2240/04 . Bayonet connections
- 2240/08 . Brazed connections
- 2240/12 . Connections using captive nuts
- 2240/16 . Welded connections
- 2240/21 . Glued connections
- 2240/24 . Connections using screws
- 2240/245 . . hollow screws, e.g. for the transmission of coolant
- 2240/32 . Connections using screw threads

2245/00 Details of adjusting inserts or bits in the milling cutter

- 2245/04 . Adjustable wedge surfaces
- 2245/08 . Setting gauges
- 2245/12 . Spiral discs

2250/00 Compensating adverse effects during milling

- 2250/04 . Balancing the cutter ([vibration damping B23C 2250/16](#))
- 2250/08 . compensating centrifugal force
- 2250/12 . Cooling and lubrication
- 2250/16 . Damping vibrations ([balancing B23C 2250/04](#))
- 2250/21 . compensating wear of parts not designed to be exchanged as wear parts

2255/00 Regulation of depth of cut

- 2255/04 . Depth indicators
- 2255/08 . Limitation of depth of cut
- 2255/12 . Depth stops

2260/00 Details of constructional elements

- 2260/04 . Adjustable elements
- 2260/08 . Bearings
- 2260/12 . Cams
- 2260/28 . Differential screw threads
- 2260/40 . Harmonic gearboxes, i.e. reduction gearing including a wave generator, a flex spline or a circular spline
- 2260/48 . Indication scales
- 2260/52 . Keys, e.g. spanners or Allen keys, especially for assembling or disassembling tooling
- 2260/56 . Lasers ([improving machinability with laser whilst milling B23P 25/003](#))
- 2260/68 . Rings
- 2260/72 . Seals
- 2260/76 . Sensors
- 2260/80 . Serrations
- 2260/84 . Springs
- 2260/88 . Steadies

2265/00 Details of general geometric configurations

- 2265/08 . Conical
- 2265/12 . Eccentric
- 2265/16 . Elliptical
- 2265/32 . Polygonal
- 2265/36 . Spherical
- 2265/40 . Spiral

2270/00 Details of milling machines, milling processes or milling tools not otherwise provided for

- 2270/02 . Use of a particular power source
- 2270/022 . . Electricity
- 2270/025 . . Hydraulics
- 2270/027 . . Pneumatics
- 2270/04 . Use of centrifugal force ([compensation of effect of centrifugal force B23C 2250/08](#))
- 2270/06 . Use of elastic or plastic deformation ([B23C 2210/161 takes precedence](#))
- 2270/08 . Clamping mechanisms or provision for clamping ([B23C 2210/16 takes precedence](#))
- 2270/10 . Use of ultrasound
- 2270/12 . Centering of two elements relative to one another
- 2270/14 . Constructions comprising exactly two similar components

- 2270/16 . Constructions comprising three or more similar components

- 2270/18 . Milling internal areas of components
- 2270/20 . Milling external areas of components