

Universal Decimal Classification —

English full edition —
Fourth international edition —
FID publication no. 179 —

UDC 621.9 Working, machining with
chip formation —
Cutting, grinding, sheet working etc.

UDC 025.45:621.9

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Foreword

The English version of the Universal Decimal Classification (UDC) is being prepared and published as BS 1000 by the British Standards Institution (BSI) at the original joint request of the British Society for International Bibliography (BSIB) and the Association of Special Libraries and Information Bureaux (ASLIB), now amalgamated as Aslib. It has the approval of the Lake Placid Education Foundation, New York, proprietors of the Dewey Decimal Classification, from which the UDC derives. The first English Full Edition is the 4th International edition authorized by the International Federation for Documentation (FID), The Hague, Netherlands.

This section is part of the English Full Edition. It should be used in conjunction with the Abridged English Edition, BS 1000A, which refers to many other subjects of interest not listed in this schedule, and provides a conspectus of the whole scheme, together with an introduction to its use. For further practical information about the principles, application and utilization of the scheme, users should refer to BS 1000C.

This edition of UDC 621.9 includes modifications authorized in “Extensions and Corrections to the UDC” up to and including Series 9, No. 1, dated June 1975. Subsequent issues of “Extensions and Corrections to the UDC” should be consulted to keep the schedule up to date. Further information about this and other UDC publications is given on page 24. British Standards related to this part of BS 1000 are listed on the inside back cover.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 26, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Scope

Under 621.9 is classed information about processes, tools, machines and equipment used in working with chip formation (removal of material), cutting, grinding and sheet-working. Plastic or chipless working, forming and treatment of materials in general are classed under 621.7.

Related subjects

620.1	Materials testing. Defects of materials. Protection of materials.
621.7	Plastic or chipless working, forming and treatment of materials in general.
621.8	Mechanical power transmission. Machine elements. Gearing. Materials handling. Mechanical attachments, fixings, fasteners. Lubrication.
658.5	Production management manufacture. Production planning, management and control.
669	Metallurgy.
674	Timber and woodworking industry.

Auxiliary signs and subdivisions

Full information about the common and special auxiliary signs and subdivisions (often abbreviated to “common and special auxiliaries”) will be found in BS 1000A and BS 1000C.

Colon sign of relation. For the classification of information for the public, as in abstracts and bibliographies, maximum use of colon combinations rather than of common or special auxiliaries is recommended. The use of the colon sign of relation is preferable for multiple entry systems, as it will help prevent the concealment of information. This usually results in longer notation, however, and for information for more restricted use, the application of auxiliaries, where available, may be simpler and more convenient provided that there is an adequate alphabetical subject index.

Common auxiliaries. The common auxiliaries of language = . . . , form (0 . . .), place (1/9), race and nationality (= . . .), time “ . . . ”, point of view .00 . . . , materials –03 . . . and persons –05 . . . are applicable throughout the UDC. However, they should be used mainly to express concepts not otherwise provided for in the schedules.

Special auxiliaries. Special auxiliary subdivisions are provided under 621.9 and many of its subdivisions. They may be detached and applied to any subdivision of the number at which they are listed, e.g.

621.9.014.4	Penetration of tool
621.932.36	Chain saws
621.932.36.014.4	Penetration of chain saws

The –1/–9 special auxiliaries listed at 62 are applicable throughout the schedule.

Typographic presentation

Small type is used for cancelled numbers and text. The arrow → means either “see” or “see also” according to the context.

The symbol $\simeq$ “subdivide as” means that the number preceding it may be subdivided in the same way as, and with meanings analogous to the subdivisions of, the number which follows it.

SCHEDULE

621.9 Working, machining with chip formation. Cutting, grinding, sheet-working etc**Special auxiliary subdivisions for 621.9**

621.9-1/-9	DETAILS OF MACHINES, TOOLS, EQUIPMENT, PROCESSES ETC	621.9.014	Efficiency of tool, machine: influencing factors, power required
621.9-1/-9	$\cong$ 62-1/-9, <i>e.g.</i>	.2	Resistance of material: frictional resistance etc →621.9.011 Machinability. Workability. Stresses and strains. Flow of material
621.9-11	General design and construction characteristics <i>This special auxiliary and its subdivisions are particularly applicable to 621.9.06/.07</i>	.3	Pressure applied to tool
-111	Machines and equipment according to the alignment of the working axis	.4	Penetration of tool →621.9.012.5 Depth of stroke: shallow/deep working
.1	Vertical	.5	Rate of working. Speed of machine, tool <i>Further particulars may be denoted by the -185 special auxiliaries listed at 62</i>
.2	Horizontal	.8	Formation of chips, flakes, flour, dust and other waste products →621.91 Cutting, machining with chip formation in general 621.96 Cutting without chip formation. Punching, shearing etc
.3	Inclined. Oblique	.015	Surface finish. Resultant condition of workpiece <i>The degree of precision may be denoted by the -187 special auxiliaries listed at 62, e.g. 621.9.015-187.4 High precision</i> <i>The surface condition may be denoted by the -408 special auxiliaries listed at 62</i>
-112	Machines and equipment according to the type of construction	.016	Working conditions (of material and surface)
.3	Self-supporting construction	.2	Hot working
.4	Simple construction, <i>e.g.</i> monobloc (one-piece)	.3	Cold working
.5	Sectional, dismantlable, built-up or multi-unit construction	.4	Dry working
.6	Prefabricated, unit construction	.5	Wet working
-113	Machines and equipment for single-workpiece machine tools	.6	Working in a controlled atmosphere
-114	Machines and equipment for multiple operation or movement, <i>e.g.</i> multi-workpiece machine tools	.019	Faulty working. Machining defects and their testing <i>Testing details may be denoted by colon combination with the subdivisions of 620.19</i>
-115	Multi-purpose machines and equipment. Universal machines, tools	621.9.02	CUTTING TOOLS. CHIP-FORMING TOOLS <i>For jig-making, tool-making</i> →621.753 <i>For forming and copying appliances, dies and accessories</i> →621.9.07 <i>Further particulars may be denoted by -1/-9 special auxiliaries, e.g.</i> 621.9.02-229 Tool holders. Workpiece holders. Handles, chucks etc
621.9.01	PRINCIPLES AND THEORY OF TOOLWORKING AND MACHINING. INFLUENCING FACTORS ETC	.021	Hand (cutting) tools
621.9.01	$\cong$ 621.7.01	.1	For making a single cut
→621.9.04	Technique and special methods of toolworking and machining	.2	For making more than one cut
.011	Machinability. Workability. Stresses and strains. Flow of material	.022	Power (cutting) tools. Machine (cutting) tools
.012	Working (machining) stroke, pass, travel, traverse: height, length etc	.1	For making a single cut
.2	Height of drop, <i>e.g.</i> of forge hammers	.2	For making more than one cut
.3	Length of stroke, travel or traverse	.025	Cutting iron (tool proper): types; steel-tipped, hard-tipped etc
.4	Width, breadth of stroke	.1	Types of cutting tool: profiled, pointed, edge tools, face tools
.5	Depth of stroke: shallow/deep working →621.9.014.4 Penetration of tool	.11	Profiled cutters for special profile forming, <i>e.g.</i> chasers
.013	Angle, rake of tool. Direction of working	.12	Pointed tools, irons (for piercing, grooving etc)
.2	Angular set, inclination of tool	.13	Edge tools (for roughing cuts etc)
.3	Rake of tool: top-rake, side-rake	.14	Face tools (for finishing, smoothing)
.4	Clearance angle: positive, negative stroke or cut		
.5	Working along the grain		
.6	Working across the grain		

621.9.025.19	Other special cutting tools, irons, <i>e.g.</i> for lathes	.7	Electron-beam machining. Machining using other particle beams
.6	Steel-tipped tools. Tool-steel tips (brazed or welded)	621.9.06	MACHINERY: DESIGN, LAYOUT, ASSEMBLIES, MAIN COMPONENTS, AUXILIARY UNITS
	621.9.025.6 $\cong$ 621.9.025.1		621.9.06 $\cong$ 621.7.06, <i>e.g.</i>
.7	Hard-tipped tools. Hardmetal, diamond tips		621.9.067 Transfer units for handling stock between operations
	621.9.025.7 $\cong$ 621.9.025.1		
	<i>Tip materials may be denoted by colon combination, e.g.</i>		
	621.9.025.7:622.371 Diamond tips		
	:669.018.25 Hardmetal tips	621.9.07	FORMING APPLIANCES. COPYING APPLIANCES. DIES. ACCESSORIES FOR WORKING AND MACHINING
	:669.018.95 Cermet tips		621.9.07 $\cong$ 621.7.07
.029	Used, worn tools and their treatment		<i>For jig-making, tool-making</i> →621.753
	<i>Further particulars may be denoted by colon combination, e.g.</i>	.072	Copying devices: master copies, templates, models
	621.9.029:621.923.6 Tool grinding	.073	Dies
621.9.04	TECHNIQUE AND SPECIAL METHODS OF TOOLWORKING AND MACHINING		<i>e.g.</i> 621.983.3.073 Deep drawing dies, punches
.041	Hand tool working	.074	Ancillary support, reinforcement appliances and formers
	→621.9.021 Hand (cutting) tools	.077	Manipulating, gripping, securing appliances. Tongs. Clamps
.042	Power tool working	.079	Accessory materials for working and machining, <i>e.g.</i> pastes, cutting fluids
	→621.9.022 Power (cutting) tools. Machine (cutting) tools		<i>Further particulars may be denoted by colon combination, e.g.</i>
.044	High-energy-rate working. Explosion working		621.9.079:621.892 Cutting fluids. Lubricants
	<i>For plastic or chipless high-energy-rate, explosion forming</i> →621.7.044	621.9.08	MEASUREMENT. TESTING
	<i>For high-energy-rate, explosion forming of sheet material</i> →621.98.044		<i>This special auxiliary is not applicable to</i>
.047	Chemical, electrochemical working and machining		621.926/.927
.4	Chemical corrosion. Chemical etching		<i>For toolmaking, tolerances etc</i> →621.753
.7	Electrolytic machining		<i>For production management and control</i> →658.5
.048	Erosion machining. Ultrasonic machining		<i>Further particulars may be denoted by colon combination with the subdivisions of</i>
	Electron-beam machining		53.08, 531.7, 681
.3	Mechanical (blast) erosion machining	09	Universal, combined tools or machines
	→621.924.9 Sandblasting. Sandblast machines and equipment		[cancelled] use 621.9.06-115
.4	Spark (erosion) machining. Electro-erosion machining		
.6	Ultrasonic machining. Vibration machining		

Principal divisions

621.91	CUTTING, MACHINING WITH CHIP FORMATION IN GENERAL	621.911.22	Planes with straight cutting edges. Jack planes. Trying planes. Smoothing planes
	→621.96 Cutting without chip formation. Punching, shearing etc	.23	Planes for making special (shaped) surfaces and sections. Groove planes. Rabbet (rebate) planes. Filisters. Ploughs. Matching planes
	<i>Further particulars may be denoted by special auxiliaries, e.g.</i>	.24	Double-handled planes, <i>e.g.</i> spokeshaves
	621.91.01 Principles and theory: cuttability, factors affecting cutting etc	.25	Adzes (handle at right-angles to arched blade)
	.02 Cutting (and roughing) tools in general	.3	Cold chisels. Chipping chisels: flat, cross-cut, half-round
621.911	PLANING, SHAPING: TECHNIQUE, TOOLS, EQUIPMENT. CHISELS	.4	Scrapers: flat, fluted, triangular, three-square
.1	Hand planing, shaping: principles, technique	.5	Strippers. Drawshaves. Draw knives
.2	Hand planes	.7	Woodworking chisels, gouges: mortise (framing, heading), firmer, paring types
	<i>Further particulars may be denoted by special auxiliaries, e.g.</i>	.72	Chisels
	621.911.2.025 Irons, cutters for hand planes	.76	Gouges

621.912	PLANING MACHINES. SHAPING MACHINES <i>Further particulars may be denoted by special auxiliaries, e.g.</i>	621.914.7	Special profiling machines <i>Further particulars may be denoted by colon combination, e.g.</i>
621.912.02	Cutting tools: planer tools, shaper tools, tool head (clapper box) etc	621.914.7:621.882.1	Screw-cutting millers
.1	Planing machines with traversing work table	621.918	FILING, RASPING: TECHNIQUES, TOOLS, MACHINES, EQUIPMENT
.12	Single pedestal types	Special auxiliary subdivisions for 621.918	
.13	Double pedestal, portal types	621.918.02	Types of file and file making in general
.2	Planing machines with traversing tool	.023	Blade, body shape: parallel edge (blunt), taper, pointed
.21	Hand-fed	.024	Cut
.22	Fed by sliding (pusher) table	.1	Single-cut
.23	Automatically fed	.5	Cross-cut
.25	Horizontal tool-shaft machines	.025	Tooth coarseness, fineness, hardness etc
.251	Trying (truing) machines	.2	Rough-cut. Bastard
.252	Thicknessing machines	.3	Medium-cut
.253	Combined trying-thicknessing machines	.4	Fine-cut. Smooth-cut
.26	Vertical tool-shaft machines	.7	Hard-edge. Hard-toothed
.27	Machines with vertical and horizontal tool-shafts	.029	Used, worn files and their treatment
.28	Machines with rotary disc cutters. Disc planing machines →621.914.28 Side-mills	Principal divisions (continued)	
.3	Shaping machines (with horizontal quick-return ram) →621.913.3 Slotting and mortising machines (vertical ram)	621.918.1	Filing technique, especially hand filing
.31	Hand operated	.2	Files: main forms, especially hand files
.33	Crank operated	.22	Rectangular cross-section
.34	Rack operated (gear drive)	.222	Flat files
621.913	SLOTTING MACHINES. MORTISING MACHINES	.224	Square files
.2	Combined shaping-slotting (or planing-slotting) machines (vertical and horizontal rams)	.23	Triangular cross-section: wedge, knife, saw files
621.913.3	Slotting and mortising machines (vertical ram)	.24	Circular cross-section
.6	Chain mortising machines →621.936.6 Chain saws	.242	Round files. Rat-tails etc
621.914	MILLING, HOBBING: TECHNIQUE, CUTTERS, HOBS, MACHINES, EQUIPMENT <i>Further particulars may be denoted by special auxiliaries, e.g.</i>	.243	Half-round files
621.914.02	Cutters: types	.245	Oval files
.1	Milling technique	.4	Rasps. Grating tools 621.918.4 ≈ 621.918.2
.2	Milling cutters, hand or machine	.8	Filing, rasping machines
.22	End-mills	.81	Reciprocating machines
.28	Side-mills →621.912.28 Machines with rotary disc cutters. Disc planing machines	.82	Rotary machines. Chain machines
.3	Milling machines	621.919	BROACHING. BROACHES →621.951.7 Reamers. Reaming
.31	Horizontal arbor machines	.1	Broaching technique, especially hand broaching
.32	Vertical spindle machines	.2	Broaches: main types, especially hand broaches
.33	Machines with horizontal arbor and vertical spindle	.3	Broaching machines
.37	Copying millers	621.92	ABRASIVE MATERIALS AND TOOLS. GRINDING AND ALLIED TECHNIQUES. CRUSHING. SEPARATING. MIXING <i>Further particulars may be denoted by special auxiliaries, e.g.</i>
.38	Machines with rotating work table	621.92.02	Tool details, types
.4	Combined boring-milling machines →621.941.277 Turning and boring lathes. Boring machines (horizontal)	.079	Accessory materials for grinding etc. Binding agents
621.941.28	Vertical lathes. Turning and boring mills (vertical)	621.921	ABRASIVES. GRINDING MATERIALS. POLISHING MATERIALS
.5	Hobbing technique	.1	Metals: powders, pastes etc
.6	Hobbing cutters. Hobs →621.924.6 Special-profile grinding machines <i>Further particulars may be denoted by colon combination, e.g.</i>	.2	Emery. Sand. Glass. Basalt. Carborundum
621.914.6:621.833	Gear hobs	.21	Emery →621.921.33 Corundum
		.22	Emery grit
		.23	Sandstone. Sand etc
		.24	Glass
		.25	Basalt
		.26	Carborundum (silicon carbide) and other abrasives containing silicon
		.27	Other carbides <i>Specific carbides may be denoted by colon combination with the subdivisions of 661.665 or by the ...621 auxiliary at 661.8</i>

621.921.3	Various other inorganic materials
.31	Rouge (hydrated iron oxide)
.32	Tripoli powder (tripolite, diatomite, infusorial earth)
.33	Corundum →621.921.21 Emery
.34	Diamond
.35	Pumice
.36	Chalk. Whiting
.37	Red lead (minimum)
.4	Vegetable materials
.41	Cork
.43	Wood: chips, shavings
.5	Leather. Buff. Chamois etc
.6	Papers, cloths coated with abrasive (emery, glass, sand etc) 621.921.6 $\cong$ 621.921.2, <i>e.g.</i> 621.921.66 Carborundum paper
.7	Textile fabrics. Cloths, felts etc
.8	Rubbers. Plastics
.9	Other abrasive polishing materials
.92	Polishing oils
621.922	ABRASIVE TOOLS. GRINDING AND POLISHING SLIPS, WHEELS, DISCS, STONES <i>For tools for special grinding and polishing processes</i> →621.923.02 <i>For grinding machine tools and stones</i> →621.924.02 <i>For abrasion saws and sawing with abrasive stone or wheel cutter</i> →621.93.026.23

Special auxiliary subdivisions for 621.922

621.922.02	Grinding, polishing tools or stones: types, manufacture, treatment
.023	Sticks. Steels etc. Whetstones
.024	Flat slabs, boards. Grinding slips. Oilstones
.025	Wheels, discs, drums etc. Grinding wheels. Grindstones
.029	Worn tools, stones and their treatment: truing, cleaning etc
.079	Accessory materials, <i>e.g.</i> pastes, oils

Principal divisions (continued)

621.922.1	Metal sticks, steels, discs, wheels, laps etc
.2	Emery, sandstone and similar tools 621.922.2 $\cong$ 621.921.2
.3	Corundum, pumice and similar tools 621.922.3 $\cong$ 621.921.3
.4	Cork, wood wheels and discs for polishing leathers
.5	Leather discs, buffs
.6	Sanding discs, drums
.7	Textile fabrics. Cloth discs, buffs
.8	Rubber, plastics discs and buffs
.9	Abrasive tools, slips, discs, wheels etc of other materials
621.923	GRINDING, POLISHING AND ALLIED PROCESSES (AND ASSOCIATED EQUIPMENT)

Special auxiliary subdivisions for 621.923

621.923.02	Generalities on tools and equipment for particular processes <i>e.g.</i> 621.923.5.02 Hones <i>Specific abrasive materials and kinds of tool may be denoted by colon combination with the subdivisions of 621.921/.922</i>
.04	Special grinding and polishing techniques 621.923.04 $\cong$ 621.9.04
.045	Grinding between centres
.046	Centreless grinding

Principal divisions (continued)

621.923.1	Grinding of flat surfaces, curved surfaces in general (the wheel as substitute for milling, filing etc)
.12	Centreless grinding of cylindrical objects
.2	Rough grinding (preliminary trimming)
.3	Intermediate grinding. Facing
.4	Fine grinding. Finishing. Smoothing
.5	Honing (and hones) →621.924.5 Cylindrical grinding, honing machines
.6	Edge, tip grinding. Tool grinding, sharpening
.7	Polishing. Lapping. Buffing
.72	Preliminary polishing with pumice
.74	Lapping
.75	Superfinishing
.77	Glazing. Burnishing
.78	Polishing with pads, mops
.9	Other special grinding or polishing techniques
621.924	GRINDING, POLISHING MACHINES (FOR CLEANING, SHARPENING, PROVIDING SURFACE KEY ETC). BRUSH CLEANING. SANDBLASTING

Special auxiliary subdivisions for 621.924

621.924.02	Machine grinding tools: design, maintenance etc <i>For grinding tools</i> →621.922.02 <i>For tools for special purposes</i> →621.923.02
.04	Machines according to special techniques 621.924.04 $\cong$ 621.923.04, <i>e.g.</i> 621.924.046 Centreless grinding machines

Principal divisions (continued)

621.924.1	Grinding machines, bench grinders, machine grinders in general
.2	Flat-surface linear grinders and equipment
.22	Single, fixed grinding surface
.221	According to surface material 621.924.221 $\cong$ 621.921
.23	Reciprocating grinding surface
.231	According to surface material 621.924.231 $\cong$ 621.921
.24	Endless-band grinding surface
.241	According to surface material 621.924.241 $\cong$ 621.921
.26	Two inclined grinding surfaces
.261	According to surface material 621.924.261 $\cong$ 621.921
.3	Rotary disc face-grinding machines and equipment 621.924.3 $\cong$ 621.924.5

621.924.5 Cylindrical grinding, honing machines

- .51 According to grinding surface material
621.924.51 $\cong$ 621.921
- .52 Work hand fed (to fixed wheel)
- .53 Work mechanically fed (to fixed wheel)
- .54 Wheel applied to the workpiece
- .541 Workpiece fixed
- .542 Workpiece moved by hand
- .543 Workpiece mechanically moved
- .55 Wheel applied to the workpiece by hand
- .552 Hand-held grinding machines
- .553 Suspended (swing) grinding machines
- .56 External grinding machines and equipment
- .57 Internal grinding machines and equipment
- .6 **Special profile grinding machines**
→621.914.6 Hobbing cutters. Hobs
Further particulars may be denoted by colon combination, e.g.
621.924.6:621.833 Gear grinders
- .61 According to grinding surface material
621.924.62 $\cong$ 621.921
- .7 **Polishing drums. Cleaning drums**
- .8 **Brush cleaning. Scratch, scaling brushes and machines**
- .81 Hand brushing, brushes (of steel or other metal)
→687.9 Brush industry. Brooms
- .82 Fixed-brush machines and equipment
- .83 Reciprocating-brush machines and equipment
- .84 Endless-band brushing machines and equipment
- .85 Rotary (disc) brushing machines and equipment
- .86 External cylindrical, conical surface machines
- .87 Internal cylindrical, conical surface machines
- .89 Other brush-cleaning, scaling, scratch-brushing equipment
- .9 **Blasting. Sandblasting. Sandblast machines and equipment**
For blast cleaning as preparation for working→621.7.023
For blast erosion machining→621.9.048.3

Special auxiliary subdivisions for 621.924.9

- 621.924.9.02 Blasting devices, tools: design, maintenance etc
- .023 Sand. Shot
621.924.023 $\cong$ 621.7.023
- .024 Nozzle. Jet
- .079 Machine (blower): design, main components, compressor
→621.61 Blowers in general. Bellows. Piston blowers. Jet blowers

Principal divisions (continued)

- 621.924.91 Sandblast machines, blowers: main types
- .911 Open blast machines. Hose sandblasters
 - .1 Simple open blast machines
 - .2 With pressure sand supply, sand cleaning and dust extraction devices
 - .3 With swinging suspended nozzle
 - .4 With rotating or revolving table
 - .5 With semi-cylindrical polishing case (housing)
 - .6 With rotary base (mounting)
 - .7 With polishing case (housing) with underground dust extraction
- .912 Chest (box) blast machines
 - .1 Suction-type
 - .2 Pressure-type
- 621.924.913 Drum sandblast machines
 - .1 With two fixed nozzles
 - .2 Gravity-type

- .3 Inclined drum-type, e.g. internally threaded, splined
- .4 With swinging, suspended nozzle
- .5 Double-chamber drum blasters
- .6 Suction-type drums
- .7 Suction-type rotating drums
- .8 Drum blasting machines for cleaning small objects on conveyer lines
- .914 Rotary table (turntable) sandblast machines
 - .1 Pressure-type with revolving nozzles
 - .2 With special high pressure device
 - .3 With revolving tubeless nozzles
 - .4 Indirect-pressure-type
 - .5 Compound-pressure-type
 - .6 Gravity-fed nozzles
- .915 Sprocket-table sandblast machines, suction-type or pressure-type, with revolving or swinging, suspended nozzles
 - .1 With a single table
 - .2 With two adjacent tables
- .916 Roiling-table sandblast machines
- .918 Centrifugal sandblast machines
- .93 Water-jet (wet) blasting
- .94 Other blast machines
- .95 Housings, casings, cabinets and other enclosures: design, construction etc
 - .952 With free blast arrangement
 - .953 With revolving stand, rotating stand
 - .954 With fixed table
 - .955 With rotary table (turntable)
 - .957 With rotary table or grid and moving nozzles
- .1 Table entirely within the housing
- .2 Table externally accessible for charging during operation
 - .96 Drums, barrels: design, construction etc
 - .99 Other blasting equipment
- .925 Grinding machines [*cancelled*]→621.924
- 621.926 CRUSHING, GRINDING, PULVERIZING, ESPECIALLY OF HARD MATERIALS
→622.73 Comminution (crushing, grinding, pulverizing)

Special auxiliary subdivisions for 621.926

- 621.926.08 Degree of comminution (size reduction)
- .082 Preliminary reduction to lumps, chunks. Breaking. Coarse crushing
- .083 Intermediate reduction to smaller pieces. Medium crushing
- .084 Reduction to granular form. Fine crushing
- .085 Fine reduction to small particle size. Fine crushing. Grinding
- .086 Superfine reduction to fine powder. Pulverization. Fine grinding

Principal divisions (continued)

- 621.926.1 Hand breaking, crushing, e.g. with hammers, pounders, pestles
- .2 Mechanical breakers, crushers in general
- .22 Jaw breakers
- .23 Shear-jaw breakers
- .3 Crushers, mills with rollers, cones, balls
- .32 Roller mills
 - .322 With spiked rollers
 - .323 With smooth or fluted rollers
 - .325 With swinging or oscillating rollers
 - .327 With multiple rollers