
Universal Decimal Classification

English full edition
Fourth international edition
FID publication no. 179

UDC 621.8 Mechanical power transmission.
Machine elements. Gearing. Materials handling.
Mechanical attachments, fixings, fasteners. Lubrication

Classification Décimale Universelle
CDU 621.8 Transmission de force mécanique. Éléments de machine.
Engrenages. Manutention. Accessoires mécaniques, fixations, attaches. Lubrification

Dezimalklassifikation
DK 621.8 Mechanische Kraftübertragung. Maschinenteile. Getriebe.
Materialtransportmittel. Mechanische Zubehörteile, Befestigungsmittel. Schmierung

Contents

	Page		Page	
Foreword	Inside front cover	621.83	Mechanical transmissions. Gears, gearing. Cams. Sliding tracks.	
Scope	Inside front cover		Ratchets. Clutches	3
Related subjects	1	621.85	Flexible drives. Flexible transmissions	4
Auxiliary signs and subdivisions	1	621.86	Materials handling in general	5
Typographic presentation	1	621.87	Cranes. Transporters. Lifts. Escalators. Levellers. Excavators. Dredgers	9
Co-operating organizations	Back cover	621.88	Fastening, fixing devices. Fasteners	10
Schedule		621.89	Lubrication	12
Special auxiliary subdivisions for 621.8	2	Alphabetical subject index		13
621.81 Machinery components in general	2	Survey of UDC editions		20
621.82 Journals. Bearings. Shafts. Couplings. Connecting rods. Links	2			

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 621.8 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 22. British standards related to this part of BS 1000 are listed on the inside back cover.

Scope

Under 621.8 is classed information about the elements of machines which transmit power mechanically, mechanisms which transform motion of one kind into that of another, mechanical devices which fasten or fix elements or objects together, and information about lubrication, lubricants and lubricating devices, when they are treated generally without reference to specific machines. However, if these items are treated as parts of specific machines they should be denoted

by the addition of the -1/-9 special auxiliaries listed at 62 to the relevant main numbers, *e.g.* 621.165-233.1, Shafts for steam turbines.

Under 621.86/.87 is classed information about the handling or moving of loads within a restricted area. Information about the transport of loads over relatively long distances is classed under 625.3/.5, 629 and 656.



Amendment Slip No. 1
published and effective from 31 August 1979
to BS 1000 [621.8] : 1976

Universal Decimal Classification. English full edition.
UDC 621.8 Mechanical power transmission.
Machine elements. Gearing. Materials handling.
Mechanical attachments, fixings, fasteners.
Lubrication.

Revised text

AMD 3036
August 1979

Foreword

In paragraph 3, lines 3 and 4, delete 'Series 9, No. 1, dated June 1975', and substitute 'Series 10, No. 1, dated June 1978'.

AMD 3036
August 1979

Schedule

621.824.3 to 621.824.44

Delete the existing numbers and the associated text and substitute the following:

- | | |
|-----|--|
| .3 | Eccentric shafts. Shafts with control elements |
| .32 | Crankshafts |
| .33 | Camshafts |
| .4 | Profile shafts (for shaft-hub connection) |
| .42 | Polygonal shafts (and shafts of uniform width) |
| .43 | Shafts with splines (with straight or involute flanks) |
| .44 | Shafts with keyways' |

AMD 3036
August 1979

New entry

Insert the following above 621.86.03 to align with .017 above:

- | | |
|------|--|
| .018 | Causes of slackness in cables and ropes. Prevention of slackness'. |
|------|--|

AMD 3036
August 1979

New entries

Insert the following above 621.882.092:

- | | |
|------|-----------------------------------|
| .083 | Runouts and undercuts for threads |
| .2 | Thread runouts |
| .4 | Thread undercuts'. |

AMD 3036
August 1979

621.886

Delete 'COTTERS' and substitute 'KEYS'.

AMD 3036
August 1979

621.886.15 to 621.886.154

Delete the existing numbers, the associated text and references and substitute the following:

- .15 Slotted hollow spring pins
 →621.886.5 Split pins. Cotter pins
- .153 Parallel pins
 →621.887.72 Split or spring bushes, collars and sleeves
- .154 Taper pins
 →621.887.82 Split or spring tapered bushes etc.
- .156 Spiral pins'.

AMD 3036
August 1979

621.886.28

Delete the existing number and text and substitute the following:

- .28 With rounded heads [*cancelled*] use
 621.886.2.091.4'.

AMD 3036
August 1979

621.886.6

Delete the existing number and text and substitute the following:

- .6 Keys. Cotters
- .63 Keys without taper
- .633 Feather keys
- .634 Parallel keys
- .636 Woodruff keys
- .64 Ordinary keys
- .641 Hollow saddle keys
- .642 Flat saddle keys
- .643 Flat saddle gib-head keys
- .645 Round-ended taper keys
- .646 Plain taper keys
- .647 Plain gib-head keys
- .648 Tangential keys
- .649 Round keys
- .66 Cotters'.

AMD 3036
August 1979

621.886.8

Delete the existing number and text and substitute the following:

- .8 Shaft keys, keyways. Splines [*cancelled*].
 For keys →621.886.63/.64'

AMD 3036
August 1979

Alphabetical subject index

Delete 'Conical' and the associated subentries and references.
Delete 'Cotter(s)' and the associated subentries and references.
After 'Crankshafts' delete '621.824.3' and substitute '621.824.32'.
Delete 'Hollow' and the associated subentries and references.
Delete 'Keys' and the associated subentries and references.
Delete 'Keyways' and the associated reference.
Delete 'Parallel' and the associated subentries and references.
Below 'Profile(s)' delete 'shafts 621.824.42' and substitute 'shafts 621.824.4'.
Delete 'Round' and the associated subentries and references.
Below 'Shaft(s)' delete 'keys 621.886.8'.
Delete 'Spiral shaker troughs' and the associated reference.
After 'Splined shafts' delete '621.824.44' and substitute '621.824.43'.
Delete 'Splines' and the associated subentry and reference.
Below 'Split' and its subheading 'pins' delete 'hollow 621.886.15'.
Below 'Spring(s)' and after the subheading 'pins' delete '621.886.5'.
Delete 'Taper(ed)' and the associated subentries and references.
Below 'Wedge(s)' delete 'fastenings 621.886.6'.

New entry

After the alphabetical subject index insert a new supplementary index as follows:

'SUPPLEMENTARY INDEX

Camshafts 621.824.33

Conical

belts 621.85.052.42

bushes, collars 621.887.8

pins

cotter 621.886.54

grooved 621.886.124

hollow spring 621.886.154

plain 621.886.114/.115

Cotter(s) 621.886.66

pins 621.886.5

securing by 621.882.53

Feather keys 621.886.633

Gib-head keys 621.886.643,
621.886.647

Hollow

nuts 621.882.56

rivets 621.884.6

saddle keys 621.886.641

shafts 621.824.6

Keys 621.886.6

Keyways

shafts with 621.824.44

Parallel

guides 621.836.2

keys 621.886.634

pins

cotter 621.886.53

grooved 621.886.113

hollow spring 621.886.153

plain 621.886.123

Polygonal shafts 621.824.42

Round *see also* Domed
heads

screws, bolts 621.882.215

keys 621.886.649

nuts 621.882.35

Runouts 621.882.083.2

Saddle keys 621.886.641/.642

Slackness

cables, ropes 621.86.018

Slotted hollow spring pins 621.886.154

Spiral

pins 621.886.156

shaker troughs 621.867.523

Tangential keys 621.886.648

Taper(ed)

bushes, collars 621.887.8

ends, screws 621.882.092.3

keys 621.886.645/.646

pins *see* Conical pins

roller bearings 621.822.87

screws 621.882.093

Undercuts 621.882.083.4

Woodruff keys 621.886.636'

Related subjects

531	General mechanics. Mechanics of solid bodies. Mechanics of rigid bodies
532	Mechanics of fluids in general. Mechanics of liquids
543	Analytical chemistry
621.3	Electrical engineering
621.6	Fluids handling, storage and distribution plant and equipment
621.798	Packing and packaging equipment, materials, machinery
621.976	Riveting machines. Hydraulic, pneumatic riveters
621.99	Screw thread forming. Screw cutting and tapping
622.6	Haulage and handling. Hoisting. Winding. Surface transport — Mining
625	Railway and highway engineering
629	Transport vehicle engineering
631.3	Agricultural machines, implements and attachments
656/656.7	Transport services. Traffic organization and control
665	Oils. Fats. Waxes
672	Articles of iron and steel in general
681	Precision mechanisms and apparatus
69.026	Stairs. Ramps. Lifts. Escalators — Building
69.057.7	Plant and equipment for handling and transport on site — Building

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. The .0 special auxiliaries listed at 621.8 are applicable throughout the schedule. They may be detached and applied to any subdivision of 621.8 where the result forms a meaningful combination. Special auxiliaries are also provided under 621.83, 621.85, 621.86, 621.874, 621.88, 621.882 and 621.892; these may be applied to any subdivision of the number at which they are listed.

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 $\cong$ '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

621.8 MECHANICAL POWER TRANSMISSION. MACHINE ELEMENTS. GEARING. MATERIALS HANDLING. MECHANICAL ATTACHMENTS, FIXINGS, FASTENERS. LUBRICATION

Special auxiliary subdivisions for 621.8

621.8-1/-9	Machinery details 621.8-1/-9 $\cong$ 62-1/-9	621.8.028	Transformation of constant speed motion into variable speed motion
		.2	According to simple laws
621.8.02	MODES OF TRANSFORMATION OF MOTION	.3	Into differential motion
	<i>The types of transmission given below apply both as indicated and in the reverse sense</i>	621.8.03	ENERGY FORMS FOR GENERATION, CONDUCTION (TRANSFER), STORAGE, TRANSFORMATION, CONTROL OF MECHANICAL FORCES AND RESISTANCES
.022	Transformation of continuous rectilinear motion	.031	Static, dynamic mass forces and resistance
.2	Into continuous rectilinear motion	.2	Static mass forces: gravity, buoyancy, inequalities in gravitational field
.3	Into reciprocating rectilinear motion	.3	Inertial forces. Gyration forces
.4	Into continuous rotary motion	.4	Dynamic mass forces. Impact forces. Centrifugal forces
.5	Into reciprocating rotary motion	.6	Surface resistance due to friction. Adhesive friction. Sliding friction. Rolling friction. Wheel friction
.6	Into continuous motion in a defined track		
.7	Into reciprocating motion in a defined track	.032	Static-dynamic fluid forces. Hydraulic forces
.023	Transformation of reciprocating rectilinear motion	.2	Utilization of kinetic energy (Föttinger, Seemann)
.3	Into reciprocating rectilinear motion	.3	Utilization of potential energy
.4	Into continuous rotary motion	.32	Variable number of pump cylinders
.5	Into reciprocating rotary motion	.34	Variable lift or stroke of piston
.6	Into continuous motion in a defined track	.033	Pneumatic forces. Air resistance
.7	Into reciprocating motion in a defined track	.034	Static-dynamic vibrational forces. Vibrational energy
.024	Transformation of continuous rotary motion	.2	Solid pendulum as energy store. Weight pendulum. Spring pendulum. Elastic pendulum
.4	Into continuous rotary motion	.3	Transverse vibrations. Transverse vibrators. Surface waves
.5	Into reciprocating rotary motion	.4	Longitudinal vibrations. Longitudinal vibrators. Acoustic vibrations
.6	Into continuous motion in a defined track	.035	Radiant energy. Thermal radiations. Light radiations
.7	Into reciprocating motion in a defined track	.036	Thermal energy. Forces of thermal expansion and contraction. Generation of pressure by heat
.025	Transformation of reciprocating rotary motion	.037	Electrostatic attraction
.5	Into reciprocating rotary motion	.038	Electromagnetic, magnetic forces
.6	Into continuous motion in a defined track	.039	Molecular forces. Resilience
.7	Into reciprocating motion in a defined track		
.026	Transformation of continuous motion in a defined track		
.6	Into continuous motion in a defined track		
.7	Into reciprocating motion in a defined track		
.027	Transformation of reciprocating motion in a defined track		
.6	Into continuous motion in a defined track		

Principal divisions

621.81	MACHINERY COMPONENTS IN GENERAL	621.822.2	Thrust bearings. Collar-thrust bearings. Neck-journal bearings. Foot step bearings
	→531.8 Theory of machines. Generalities on technical mechanics	.3	Bearings adaptable to the location on the shaft. Self-aligning bearings. Bearings with adjustable height and inclination
	<i>For particular components of machines</i>	.5	Plain (sliding contact) bearings
	→62-1/-8	.52	Plummer blocks
621.82	JOURNALS. BEARINGS. SHAFTS. COUPLINGS. CONNECTING RODS. LINKS	.53	Pendant (hanging) bearings
		.55	Wall-bracket bearings
		.56	Pillar-bracket (pedestal) bearings
		.57	Bearings with oil, air or other gas under pressure
621.821	JOURNALS. PIVOTS. TRUNNIONS	.572	Hydrostatic
.2	Journals	.573	Hydrodynamic
.3	Pivots. Trunnions	.574	Aerostatic
		.575	Aerodynamic
621.822	BEARINGS. BUSHES	.6	Rolling contact bearings in general
	→62-233.2 Bearings	.66	Adapter bearings
.1	Bearings in general	.7	Ball bearings
	→62-722.2 Oil grooves		→621.822.88 Bearings with balls and rollers. Ball-roller bearings