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Mechanisms Series record of documents

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MECHANISMS SERIES RECORD OF DOCUMENTS

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MECHANISMS SERIES RECORD OF DOCUMENTS

1. PREFACE TO MECHANISMS SERIES

The data concerning mechanisms, in common with those relating to many other phenomena of concern to engineers in industry, are widely scattered and when located are of variable quality and relevance to industrial application. Engineering designers do not, generally speaking, have the facilities or time required to collect and evaluate all the data available that may be applicable. However they require to view designs not against some locally derived data, but against what can be demonstrated to be the best data and they need to know that these data are up-to-date and vouched for by a qualified cross section of the engineering and scientific community. It is ESDU's purpose to provide data of this nature relating to mechanisms as in many other fields. ESDU prepares this information for both the designer and the designer's customer and, by serving the needs of many, accomplishes the task at much lower cost than would apply to the individual performing alone.

A qualified staff, with the assistance of many individuals and establishments throughout the world in research, industry and teaching, collects and evaluates the existing data. The staff discards that which is irrelevant or unreliable, correlating and distilling what remains into an authoritative working tool for engineering application. Throughout, their work is guided and monitored by expert groups and ad hoc working parties. ESDU Data Items are organised in Series. This Series on Mechanisms has been compiled from Data Items prepared, up to 1969, under the guidance of the I.Mech.E. Kinematics Committee or Sub-committees or Working Parties appointed by that Committee. The individuals responsible for the preparation of each Item are listed within each Item. Work on Data Items for the Mechanisms Series, apart from necessary amendments, was suspended between 1969 and 1975. In 1975 work on mechanisms was resumed under the guidance of the Mechanisms Committee which now has the following constitution:

Chairman

Dr C.W. Stammers – University of Bath

Vice-Chairman

Dr G. Druce – Independent

Members

Dr C. Burvill [†]	–	University of Melbourne, Australia
Mr P.J. Carden	–	Ricardo Consulting Engineers, Shoreham-by-Sea
Mr A.A. Fogarasy	–	Independent
Dr M.J. Gilmartin	–	Liverpool John Moores University
Dr J.N. Hammar	–	Design in Motion Ltd, Milton Keynes
Dr M.R. Smith [‡]	–	Independent
Professor Z. Ye [†]	–	Fuzhou University, P.R. China.

The members of Staff of the Engineering Sciences Data Unit concerned are:

Mr C.J. Loughton – Head, Mechanical Motion and System Dynamics Group.

Unlike many other forms of information data are alive, being constantly generated and tested in practice. Likewise ESDU is a living organism which draws its strength not only from the sources of new data but also from those who apply the working tools we provide. Accordingly, users of the service are encouraged to regard ESDU as a widely based group of people constantly available to answer questions and discuss the applications of data in engineering.

[†] Corresponding Member

[‡] Member Emeritus

2. GUIDE CARD SECTIONS FOR MECHANISMS SERIES

GUIDE CARD SECTION	SECTION TITLE
1	Organisational Documents
2	General
3	Gears
4	Contact Stresses
5	Cams – Guide to Data Items
6	Cams – Calculation Methods
7	Cams – Derivation of Equations
8	Cams – Estimation of Basic Dimensions
9	Cams – Examples
10	Cams – Cam Law Blending
11	Cams – Material Selection
12	Cams – Stress and Lubrication Analysis
13	Cams – Selection
14	Linkages – Atlas of Performance Curves
15	Linkages – Synthesis and Analysis
16	Workbench
17	Linkages – Balancing
18	Geneva Mechanisms
19	OSMEC – Linkage Analysis Software
20	Springs