

OSMEC. Computer-aided linkage design: installation

Associated software: OSMEC

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THE PREPARATION OF THIS DATA ITEM

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The Mechanisms Committee, which first met in 1975, is continuing the work that was previously the responsibility of the former Gearing and Mechanisms Committee, which first met in November 1964. Like the earlier Committee it has the co-operation of many engineers and scientists in industry, research establishments and universities from whom much assistance and information is being received.

OSMEC. COMPUTER-AIDED LINKAGE DESIGN: INSTALLATION

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OSMEC. COMPUTER-AIDED LINKAGE DESIGN: INSTALLATION

1. INTRODUCTION

This Data Item describes the installation details, hardware requirements and configuration details for OSMEC, a general-purpose mechanism design program. The configuration details of associated printers and plotters are also provided.

OSMEC can model plane mechanisms composed of links, pivoted and sliding joints, gear trains and springs and cam-driven mechanisms and can interface with the cam design program OSCAM (see References 1 and 2). The program is menu driven, has extensive on-line help and can be used to design mechanisms for applications involving high speeds and large forces.

OSMEC displays static and animated drawings of a mechanism and graphs and tables of positions of points, angles of links, linear and angular velocities and accelerations, driving and bearing forces and drive torque. The dimensions, masses, moments of inertia and load forces can be altered easily and quickly and the effects of these alterations are immediately analysed and displayed. Hard copy of any display can be sent to a plotter or printer, or converted to a variety of formats (including HPGL) for use in other applications. OSMEC can export a DXF file to CAD software.

OSMEC allows loads to be applied to any link in a mechanism as external forces/torques or using linear/torsion springs of all types. Inertial effects may also be included. An extensive library of mechanism models representing the majority of planar linkages found in practice is included.

A user manual for OSMEC is described in an associated Data Item, No. 97026 (Reference 3). Basic examples that provide insight into the application of the OSMEC software are detailed in Data Item No. 98023 (Reference 4).

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2. PROGRAM ACCESSIBILITY AND INSTALLATION

2.1 Hardware Requirements

The program requires a minimum of a 386 personal computer with at least 4 Mb of RAM, a maths co-processor and a mouse.

A printer is necessary if hardcopy of graphical or tabular output is required. Hardcopy of graphics output can be obtained from any printer or plotter supported by Microsoft Windows.

The program OSMEC is available specifically for users of PCs running the Microsoft Windows 95 (or later) operating system.

2.2 Accessibility

ESDU software can be accessed in a number of ways, through:

- (i) the ESDU Website, www.esdu.com, through a user name and password,
 - (ii) an Intranet based on the ESDU website (or in exceptional circumstances on the ESDU CD-ROM),
 - (iii) local or network Series on a CD-ROM, which installs as ESDUscope, and includes a licence disk covering access to an electronic version of the Data Items and associated software,
- or
- (iv) a hardcopy set of Data Items of the Series and a copy of Series CD-ROM, which includes a licence disk covering access solely to the software.

2.3 Installation of VIEWpac OSMEC

Series CD-ROM. The executable program, VIEWpac OSMEC^{*}, and associated files are automatically installed once the Series CD-ROM is installed.

Web Site. The executable program, VIEWpac OSMEC[†], and associated files are downloaded as a zip file to a directory location specified in a user's zip utility.

In the event of any difficulty installing or operating this software, please contact ESDU International.

2.4 Copyright and Fitness for Purpose

The software and this user manual are copyright with all rights reserved by ESDU International plc. The distribution and licensing of OSMEC is for the exclusive use of the licensed organisation only for as long as that organisation subscribes to the ESDU volume containing the OSMEC manual and software.

Unauthorised copying, duplicating, selling, or otherwise distributing the software or this manual or the intellectual property therein will be subject to civil and criminal action.

* The full name of a program file depends upon the current version number of the program. Thus, for example, the full name of Version 7.0 of the executable program file OSMEC will be OSMECv70.EXE and must be used when accessing the file.