ANSYS

Theory Reference

Release 5.6

We have shipped this manual unassembled to prevent unnecessary damage to the pages and binder rings during shipping.

To assemble the manual:

1. Remove the shrink–wrap packaging.
2. Insert all pages onto the binder rings. We suggest you keep the heavy, blank pages on the front and back of the manual.
3. Insert the plastic sheet lifter in *front* of the manual to help keep the pages from getting caught under the curved portion of the rings.

ANSYS, Inc.
Southpointe
275 Technology Drive
Canonsburg, PA 15317
Phone: (724) 746–3304
Fax: (724) 514–9494
Internet: ansysinfo@ansys.com

ANSYS

Theory Reference

Release 5.6

Edited by
Peter Kohnke, Ph.D.

ANSYS, Inc.
Southpointe
275 Technology Drive
Canonsburg, PA 15317
Phone: (724) 746–3304
Fax: (724) 514–9494
Internet: ansysinfo@ansys.com

Revision History

DN–R300:50–4	Upd0	ANSYS Revision 5.0	December 23, 1992
DN–R300:50–4	Upd0	ANSYS Revision 5.0	November 1, 1993
DN–R300:50–4	Upd0	ANSYS Revision 5.0	November 19, 1993
DN–R300:50–4	Upd0	ANSYS Revision 5.0	February 15, 1994
DN–R300:51–4	Upd0	ANSYS Revision 5.1	September 30, 1994
000450	Upd0	ANSYS Revision 5.2	August 31, 1995
000656	Seventh Edition	ANSYS Release 5.3	June 1996
000855	Eighth Edition	ANSYS Release 5.4	September 1997
001099	Tenth Edition	ANSYS Release 5.5	September 1998
001242	Eleventh Edition	ANSYS Release 5.6	November 1999

Registered Trademarks

Disclaimer Notice

Acknowledgement

The contributions of the technical staff at ANSYS, Inc. are gratefully acknowledged for writing most of the modifications required to update the Theory volume of the User's Manual from the previous edition. Production help came from many sides, but special mention must be made of Jackie Williamson, who considers this "her" manual for good reason. Further, many people throughout ANSYS, Inc. were involved in checking of the manuscript and this is also appreciated.

Note

Most equations are shown in a different font than the rest of the text. For example, the equation may use ϱ, but the text uses ρ. This discrepancy will be removed at a later edition. The editor apologizes for any inconvenience that this causes.

Future Editions

The ANSYS program is continually being improved and expanded, so future editions of this manual are planned. It is requested that all suggestions for improvements to the manual, or to the theory itself, be forwarded to the editor so this manual and the ANSYS program can be made more useful.

Theory Reference
Table of Contents

The Solvers

15 Analysis Tools

16 This chapter intentionally omitted

17 Analysis Procedures

The Data Handlers

18 Pre and Postprocessing Tools

19 Postprocessing

20 Design Optimization