

# TECHNICAL REPORT

**ISO/TR  
9274**

First edition  
1991-02-15

---

## **Rolling bearings — Measuring and gauging principles and methods**

*Roulements — Principes et méthodes de mesurage et de vérification par calibres*



Reference number  
ISO/TR 9274 : 1991 (E)

## Contents

|                                                                                                                            | Page |
|----------------------------------------------------------------------------------------------------------------------------|------|
| 1 Scope .....                                                                                                              | 1    |
| 2 References .....                                                                                                         | 1    |
| 3 Definitions .....                                                                                                        | 1    |
| 4 Symbols .....                                                                                                            | 3    |
| 5 General conditions .....                                                                                                 | 4    |
| 6 Measuring and gauging principles and methods .....                                                                       | 7    |
| 7 Inner and outer rings, shaft and housing washers .....                                                                   | 8    |
| 7.1 Bore diameter ( $\Delta_{dmp}$ , $V_{dp}$ , $V_{dmp}$ , $\Delta_{ds}$ ) .....                                          | 8    |
| 7.2 Roller complement bore diameter .....                                                                                  | 9    |
| 7.3 Outside diameter ( $\Delta_{Dmp}$ , $V_{Dp}$ , $V_{Dmp}$ , $\Delta_{Ds}$ ) .....                                       | 12   |
| 7.4 Ring width and flange width ( $\Delta_{Bs}$ , $V_{Bs}$ , $\Delta_{Cs}$ , $V_{Cs}$ , $\Delta_{C1s}$ , $V_{C1s}$ ) ..... | 14   |
| 7.5 Chamfer dimensions ( $r_{smin}$ , $r_{smax}$ ) .....                                                                   | 16   |
| 7.6 Face runout with bore ( $S_d$ ) .....                                                                                  | 17   |
| 7.7 Variation of outside surface generatrix inclination with face ( $S_D$ ) .....                                          | 19   |
| 7.8 Thickness variation of thrust bearing washer ( $S_i$ , $S_e$ ) .....                                                   | 20   |
| 8 Assembled bearings .....                                                                                                 | 23   |
| 8.1 Assembled bearing width or height ( $\Delta_{Ts}$ , $\Delta_{T1s}$ ) .....                                             | 23   |
| 8.2 Radial runout of assembled bearing inner ring ( $K_{ia}$ ) .....                                                       | 25   |
| 8.3 Radial runout of assembled bearing outer ring ( $K_{ea}$ ) .....                                                       | 27   |
| 8.4 Assembled bearing inner ring face runout with raceway ( $S_{ia}$ ) .....                                               | 29   |
| 8.5 Assembled bearing outer ring face runout with raceway ( $S_{ea}$ ) .....                                               | 30   |
| 8.6 Radial internal clearance ( $G_r$ ) .....                                                                              | 31   |

© ISO 1991

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization  
Case postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland