

---

---

**Geometrical Product Specifications  
(GPS) — Length standards — Gauge blocks**

*Spécification géométrique des produits (GPS) — Étalons de longueur —  
Cales-étalons*



## Contents

|                                                                        |          |
|------------------------------------------------------------------------|----------|
| <b>1 Scope .....</b>                                                   | <b>1</b> |
| <b>2 Normative references .....</b>                                    | <b>1</b> |
| <b>3 Definitions .....</b>                                             | <b>1</b> |
| <b>4 Nomenclature of faces .....</b>                                   | <b>3</b> |
| <b>5 Basis of measurement, traceability, reference condition .....</b> | <b>4</b> |
| <b>5.1 Unit of length: metre.....</b>                                  | <b>4</b> |
| <b>5.2 Traceability of the length of a gauge block.....</b>            | <b>4</b> |
| <b>5.3 Reference temperature and standard pressure.....</b>            | <b>4</b> |
| <b>5.4 Reference orientation of gauge blocks .....</b>                 | <b>5</b> |
| <b>6 General dimensions, material properties, marking .....</b>        | <b>5</b> |
| <b>6.1 General dimensions.....</b>                                     | <b>5</b> |
| <b>6.2 Material properties.....</b>                                    | <b>5</b> |
| <b>6.2.1 Material .....</b>                                            | <b>5</b> |
| <b>6.2.2 Coefficient of thermal expansion .....</b>                    | <b>6</b> |
| <b>6.2.3 Hardness.....</b>                                             | <b>6</b> |
| <b>6.2.4 Dimensional stability .....</b>                               | <b>6</b> |
| <b>6.3 Marking .....</b>                                               | <b>6</b> |
| <b>7 Metrological requirements.....</b>                                | <b>6</b> |
| <b>7.1 General.....</b>                                                | <b>6</b> |
| <b>7.2 Flatness tolerance, <math>t_f</math> .....</b>                  | <b>7</b> |
| <b>7.2.1 Gauge blocks with nominal lengths exceeding 2,5 mm .....</b>  | <b>7</b> |
| <b>7.2.2 Gauge blocks with nominal lengths up to 2,5 mm .....</b>      | <b>7</b> |
| <b>7.3 Measuring faces.....</b>                                        | <b>7</b> |

© ISO 1998

All rights reserved. Unless otherwise specified, 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  
Internet iso@iso.ch

Printed in Switzerland