

# ISO 3548-3:2023-03 (E)

## Plain bearings - Thin-walled half bearings with or without flange - Part 3: Determination of the peripheral length

---

<b>Contents</b>		<b>Page</b>
Foreword .....		v
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Symbols .....	2
5	Purpose of checking .....	4
6	Measurement methods .....	4
6.1	Method A .....	4
6.2	Method B .....	5
7	Choice and designation of checking method .....	6
7.1	Choice of checking method .....	6
7.2	Designation of checking method .....	7
8	Measuring equipment .....	7
9	Measuring equipment requirements .....	9
9.1	General .....	9
9.2	Tolerance on checking load setting .....	9
9.3	Speed of approach of measuring head .....	10
9.4	Construction of measuring head .....	10
9.5	Accuracy of the measuring plane for metering bars .....	10
9.6	Accuracy of the dial gauge .....	10
10	Gauging tools for establishing the datum .....	10
10.1	General .....	10
10.2	Master checking block (used alone) .....	11
10.3	Series checking block used alone .....	11
10.4	Series checking block with master shell .....	11
11	Checking block requirements .....	11
11.1	General .....	11
11.2	Reference tooling: Master checking block -- General .....	12
11.2.1	Reference tooling -- Master checking block .....	12
11.2.2	Manufacturing limits -- General .....	12
11.2.3	Measuring accuracy of equipment used for establishing dcbm,M and Hcbm,M .....	13
11.2.4	Permissible wear limit .....	14
11.3	Series gauging tools .....	14
11.3.1	Series checking block used alone .....	14
11.3.2	Manufacturing limits, correction factor and permissible wear limit .....	14
11.3.3	Series checking block with master shell or with comparison shell .....	16
12	Master shell and comparison shell requirements .....	16
12.1	Master shell requirements .....	16
12.1.1	Manufacturing limits .....	17

12.1.2	Correction factor, Fcor ms .....	18
12.1.3	Permissible wear limit .....	18
12.2	Comparison shell requirements .....	18
13	Correction factors .....	19
13.1	Reference tooling: Master checking block correction factor, Fcor cbm .....	19
13.2	Series control tooling .....	19
13.2.1	Correction factor for series checking block used alone, Fcor cbs .....	19
13.2.2	Correction factor for series checking block with master shell .....	19
13.2.3	Master shell correction factor, Fcor ms .....	19
13.2.4	Comparison shell correction factor, Fcor cs .....	20
13.3	Marking .....	20
13.4	Reference setting .....	20
14	Typical checking procedure .....	20
15	Conditions of the half bearings to be checked .....	21
16	Measuring errors .....	21
16.1	Errors due to measuring equipment .....	21
16.2	Errors due to the checking block .....	21
16.3	Errors due to the correction factor .....	22
16.4	Errors due to the half bearing .....	22
16.5	Error due to the choice of checking method .....	22
17	Accuracy of methods used .....	22
17.1	General .....	22
17.2	Checking conditions .....	22
17.3	Limits .....	22
17.4	Calculation .....	22
18	Specifications on bearing drawings .....	22
19	Specifications for the control of the checking means .....	23
Annex A	(normative) Determination of the correction factor of the master checking block -- Method A .....	24
Annex B	(normative) Determination of the correction factor of the master checking block -- Method B .....	29
Annex C	(normative) Determination of the correction factor of the series checking block used alone .....	33
Annex D	(normative) Determination of the correction factor of the master shell or comparison shell .....	35
Annex E	(normative) Tests and calculation of repeatability, reproducibility and comparability .....	37
Bibliography	.....	40