

**BRITISH STANDARD**

# **ISO metric screw threads**

## **Part 2: Specification for selected limits of size**

ICS 21.040.10

## **Publishing and copyright information**

The BSI copyright notice displayed in this document indicates when the document was last issued.

© BSI 2007

ISBN 978 0 580 57925 7

The following BSI references relate to the work on this standard:

Committee reference FME/9

Draft for comment 07/30158488 DC

## **Publication history**

First published June 1965

Second edition, December 1966

Thid edition, December 1981

Fourth edition, November 2007

## **Amendments issued since publication**

| <b>Amd. no.</b> | <b>Date</b> | <b>Text affected</b> |
|-----------------|-------------|----------------------|
|-----------------|-------------|----------------------|

---

# Contents

Foreword *ii*

|          |                       |          |
|----------|-----------------------|----------|
| <b>1</b> | Scope                 | <i>1</i> |
| <b>2</b> | Normative references  | <i>1</i> |
| <b>3</b> | Terms and definitions | <i>1</i> |
| <b>4</b> | Designation           | <i>2</i> |
| <b>5</b> | Requirements          | <i>2</i> |

## **Annexes**

Annex A (normative) Fundamental deviations, tolerances and limits of size for additional tolerance classes for aerospace use *39*

Bibliography *42*

## **List of tables**

Table 1 – ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement *3*

Table A.1 – ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement for aerospace use *40*

## **Summary of pages**

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 42, an inside back cover and a back cover.

# Foreword

## Publishing information

This part of BS 3643 is published by BSI and came into effect on 30 November 2007. It was prepared by Subcommittee SFTSE/1, *Screws and fasteners technical specification committee*, under the authority of Technical Committee FME/9, *Nuts, bolts and accessories*. A list of organizations represented on this committee can be obtained on request to its secretary.

## Supersession

This part of BS 3643 supersedes BS 3643-2:1981, which is withdrawn.

## Relationship with other publications

BS 3643 consists of the following parts:

- *Part 1: Principles and basic data;*
- *Part 2: Specification for selected limits of size.*

## Information about this document

This part of BS 3643 has been revised to bring it up to date.

## Hazard warnings

**WARNING.** Attention is drawn to the fact that, with the different screw thread forms available, there is the possibility of a mismatch, which is potentially hazardous. It is the responsibility of the designer of the end product to ensure that this possibility is reduced to a minimum. For further information on mismatches of screw thread systems see PD 6494.

## Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

*Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.*

## Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

**Compliance with a British Standard cannot confer immunity from legal obligations.**

## 1 Scope

This part of this BS 3643 specifies the fundamental deviations, tolerances and limits of size for the tolerance classes 4H, 5H, 6H and 7H for internal threads and 4h, 6g and 8g for external threads where appropriate for:

- a coarse pitch series with the range 1 mm to 68 mm diameter;
- a fine pitch series with the range 1 mm to 33 mm diameter;
- a constant pitch series with the range 8 mm to 300 mm diameter.

For certain diameter/pitch combinations, the fundamental deviations, tolerances and limits of size for tolerance class 4H for internal threads and tolerance classes 6h and 4g for external threads, primarily for aerospace use, are specified in Annex A.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 3643-1:2007, *ISO metric screw threads – Principles and basic data*

## 3 Terms and definitions

For the purposes of this part of BS 3643 the terms and definitions given in BS 3643-1:2007 apply.

## 4 Designation

The complete designation for a screw thread shall comprise a designation for the thread system and a designation for the thread tolerance class in accordance with BS 3643-1:2007, 7.3.

EXAMPLES:

### External thread

**M10 – 6g**

Thread of 10 mm nominal diameter in the coarse thread series \_\_\_\_\_

Tolerance class for pitch and major diameters \_\_\_\_\_

**M10 x 1 – 6g**

Thread of 10 mm nominal diameter having a pitch of 1 mm \_\_\_\_\_

Tolerance class for pitch and major diameters \_\_\_\_\_

### Internal thread

**M10 – 6H**

Thread of 10 mm nominal diameter in the coarse thread series \_\_\_\_\_

Tolerance class for pitch and minor diameters \_\_\_\_\_

## 5 Requirements

Fundamental deviations, tolerances and limits of size shall be as specified in Table 1.

*NOTE For the minor diameter of external threads Table 1 specifies the minimum dimensions only. The maximum dimensions have not been specified because of the requirement in BS 3643-1:2007, 7.9, that these dimensions are to be controlled by the GO gauge.*

Table 1 ISO Metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement  
All dimensions are in millimetres.

| 1                | 2      | 3    | 4        | 5                | 6          | 7              | 8              | 9              | 10             | 11             | 12             | 13             | 14               | 15          | 16                      | 17                      | 18                      | 19                      | 20                      | 21                      | 22                      |
|------------------|--------|------|----------|------------------|------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|-------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Nominal diameter | Pitch  |      |          | External threads |            |                |                |                |                |                |                |                | Internal threads |             |                         |                         |                         |                         |                         |                         |                         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev.  | Major diameter |                |                | Pitch diameter |                |                | Minor diameter | Tolerance class  | Fund dev.   | Major diameter          | Pitch diameter          |                         |                         | Minor diameter          |                         |                         |
|                  |        |      |          |                  |            | max.           | tol.           | min.           | max.           | tol.           | min.           |                |                  |             |                         | min.                    | max.                    | tol.                    | min.                    | max.                    | tol.                    |
| 1                |        | 0.2  |          | 4h<br>6g         | 0<br>0.017 | 1.000<br>0.983 | 0.036<br>0.056 | 0.964<br>0.927 | 0.870<br>0.853 | 0.030<br>0.048 | 0.840<br>0.805 | 0.717<br>0.682 | 4H               | 0           | 1.000                   | 0.910                   | 0.040                   | 0.870                   | 0.821                   | 0.038                   | 0.783                   |
|                  | 0.25   |      |          | 4h<br>6g         | 0<br>0.018 | 1.000<br>0.982 | 0.042<br>0.067 | 0.958<br>0.915 | 0.838<br>0.820 | 0.034<br>0.053 | 0.804<br>0.767 | 0.649<br>0.613 | 4H<br>5H         | 0<br>0      | 1.000<br>1.000          | 0.883<br>0.894          | 0.045<br>0.056          | 0.838<br>0.838          | 0.774<br>0.785          | 0.045<br>0.056          | 0.729<br>0.729          |
| 1.1              |        | 0.2  |          | 4h<br>6g         | 0<br>0.017 | 1.100<br>1.083 | 0.036<br>0.056 | 1.064<br>1.027 | 0.970<br>0.953 | 0.030<br>0.048 | 0.940<br>0.905 | 0.817<br>0.782 | 4H               | 0           | 1.100                   | 1.010                   | 0.040                   | 0.970                   | 0.921                   | 0.038                   | 0.883                   |
|                  | 0.25   |      |          | 4h<br>6g         | 0<br>0.018 | 1.100<br>1.082 | 0.042<br>0.067 | 1.058<br>1.015 | 0.938<br>0.920 | 0.034<br>0.053 | 0.904<br>0.867 | 0.750<br>0.713 | 4H<br>5H         | 0<br>0      | 1.100<br>1.100          | 0.983<br>0.994          | 0.045<br>0.056          | 0.938<br>0.938          | 0.874<br>0.885          | 0.045<br>0.056          | 0.829<br>0.829          |
| 1.2              |        | 0.2  |          | 4h<br>6g         | 0<br>0.017 | 1.200<br>1.183 | 0.036<br>0.056 | 1.164<br>1.127 | 1.070<br>1.053 | 0.030<br>0.048 | 1.040<br>1.005 | 0.917<br>0.882 | 4H               | 0           | 1.200                   | 1.110                   | 0.040                   | 1.070                   | 1.021                   | 0.038                   | 0.983                   |
|                  | 0.25   |      |          | 4h<br>6g         | 0<br>0.018 | 1.200<br>1.182 | 0.042<br>0.067 | 1.158<br>1.115 | 1.038<br>1.020 | 0.034<br>0.053 | 1.004<br>0.967 | 0.850<br>0.813 | 4H<br>5H         | 0<br>0      | 1.200<br>1.200          | 1.083<br>1.094          | 0.045<br>0.056          | 1.038<br>1.038          | 0.974<br>0.985          | 0.045<br>0.056          | 0.929<br>0.929          |
| 1.4              |        | 0.2  |          | 4h<br>6g         | 0<br>0.017 | 1.400<br>1.383 | 0.036<br>0.056 | 1.364<br>1.327 | 1.270<br>1.253 | 0.030<br>0.048 | 1.240<br>1.205 | 1.117<br>1.082 | 4H               | 0           | 1.400                   | 1.310                   | 0.040                   | 1.270                   | 1.221                   | 0.038                   | 1.183                   |
|                  | 0.3    |      |          | 4h<br>6g         | 0<br>0.018 | 1.400<br>1.382 | 0.048<br>0.075 | 1.352<br>1.307 | 1.205<br>1.187 | 0.036<br>0.056 | 1.169<br>1.131 | 0.984<br>0.946 | 4H<br>5H<br>6H   | 0<br>0<br>0 | 1.400<br>1.400<br>1.400 | 1.253<br>1.265<br>1.280 | 0.048<br>0.060<br>0.075 | 1.205<br>1.205<br>1.205 | 1.128<br>1.142<br>1.160 | 0.053<br>0.067<br>0.085 | 1.075<br>1.075<br>1.075 |
| 1.6              |        | 0.2  |          | 4h<br>6g         | 0<br>0.017 | 1.600<br>1.583 | 0.036<br>0.056 | 1.564<br>1.527 | 1.470<br>1.453 | 0.032<br>0.050 | 1.438<br>1.403 | 1.315<br>1.280 | 4H               | 0           | 1.600                   | 1.512                   | 0.042                   | 1.470                   | 1.421                   | 0.038                   | 1.383                   |
|                  | 0.35   |      |          | 4h<br>6g         | 0<br>0.019 | 1.600<br>1.581 | 0.053<br>0.085 | 1.547<br>1.496 | 1.373<br>1.354 | 0.040<br>0.063 | 1.333<br>1.291 | 1.117<br>1.075 | 4H<br>5H<br>6H   | 0<br>0<br>0 | 1.600<br>1.600<br>1.600 | 1.426<br>1.440<br>1.458 | 0.053<br>0.067<br>0.085 | 1.373<br>1.373<br>1.373 | 1.284<br>1.301<br>1.321 | 0.063<br>0.080<br>0.100 | 1.221<br>1.221<br>1.221 |



BS  
2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6          | 7              | 8              | 9              | 10             | 11             | 12             | 13             | 14               | 15          | 16                      | 17                      | 18                      | 19                      | 20                      | 21                      | 22                      |
|------------------|--------|------|----------|------------------|------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|-------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Nominal diameter | Pitch  |      |          | External threads |            |                |                |                |                |                |                |                | Internal threads |             |                         |                         |                         |                         |                         |                         |                         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev.  | Major diameter |                |                | Pitch diameter |                |                | Minor diameter | Tolerance class  | Fund dev.   | Major diameter          | Pitch diameter          |                         |                         | Minor diameter          |                         |                         |
|                  |        |      |          |                  |            | max.           | tol.           | min.           | max.           | tol.           | min.           |                |                  |             |                         | max.                    | tol.                    | min.                    |                         |                         |                         |
|                  |        |      |          |                  |            |                |                |                |                |                |                |                |                  |             |                         |                         |                         |                         |                         |                         |                         |
| 1.8              |        | 0.2  |          | 4h<br>6g         | 0<br>0.017 | 1.800<br>1.783 | 0.036<br>0.056 | 1.764<br>1.727 | 1.670<br>1.653 | 0.032<br>0.050 | 1.638<br>1.603 | 1.515<br>1.480 | 4H               | 0           | 1.800                   | 1.712                   | 0.042                   | 1.670                   | 1.621                   | 0.038                   | 1.583                   |
|                  | 0.35   |      |          | 4h<br>6g         | 0<br>0.019 | 1.800<br>1.781 | 0.053<br>0.085 | 1.747<br>1.696 | 1.573<br>1.554 | 0.040<br>0.063 | 1.533<br>1.491 | 1.317<br>1.275 | 4H<br>5H<br>6H   | 0<br>0<br>0 | 1.800<br>1.800<br>1.800 | 1.626<br>1.640<br>1.658 | 0.053<br>0.067<br>0.085 | 1.573<br>1.573<br>1.573 | 1.484<br>1.501<br>1.521 | 0.063<br>0.080<br>0.100 | 1.421<br>1.421<br>1.421 |
|                  |        |      |          |                  |            |                |                |                |                |                |                |                |                  |             |                         |                         |                         |                         |                         |                         |                         |
| 2                |        | 0.25 |          | 4h<br>6g         | 0<br>0.018 | 2.000<br>1.982 | 0.042<br>0.067 | 1.958<br>1.915 | 1.838<br>1.820 | 0.036<br>0.056 | 1.802<br>1.764 | 1.648<br>1.610 | 4H<br>5H         | 0<br>0      | 2.000<br>2.000          | 1.886<br>1.898          | 0.048<br>0.060          | 1.838<br>1.838          | 1.774<br>1.785          | 0.045<br>0.056          | 1.729<br>1.729          |
|                  | 0.4    |      |          | 4h<br>6g         | 0<br>0.019 | 2.000<br>1.981 | 0.060<br>0.095 | 1.940<br>1.886 | 1.740<br>1.721 | 0.042<br>0.067 | 1.698<br>1.654 | 1.452<br>1.408 | 4H<br>5H<br>6H   | 0<br>0<br>0 | 2.000<br>2.000<br>2.000 | 1.796<br>1.811<br>1.830 | 0.056<br>0.071<br>0.090 | 1.740<br>1.740<br>1.740 | 1.638<br>1.657<br>1.679 | 0.071<br>0.090<br>0.112 | 1.567<br>1.567<br>1.567 |
|                  |        |      |          |                  |            |                |                |                |                |                |                |                |                  |             |                         |                         |                         |                         |                         |                         |                         |
| 2.2              |        | 0.25 |          | 4h<br>6g         | 0<br>0.018 | 2.200<br>2.182 | 0.042<br>0.067 | 2.158<br>2.115 | 2.038<br>2.020 | 0.036<br>0.056 | 2.002<br>1.964 | 1.848<br>1.810 | 4H<br>5H         | 0<br>0      | 2.200<br>2.200          | 2.086<br>2.098          | 0.048<br>0.060          | 2.038<br>2.038          | 1.974<br>1.985          | 0.045<br>0.056          | 1.929<br>1.929          |
|                  | 0.45   |      |          | 4h<br>6g         | 0<br>0.020 | 2.200<br>2.180 | 0.063<br>0.100 | 2.137<br>2.080 | 1.908<br>1.888 | 0.045<br>0.071 | 1.863<br>1.817 | 1.585<br>1.539 | 4H<br>5H<br>6H   | 0<br>0<br>0 | 2.200<br>2.200<br>2.200 | 1.968<br>1.983<br>2.003 | 0.060<br>0.075<br>0.095 | 1.908<br>1.908<br>1.908 | 1.793<br>1.813<br>1.838 | 0.080<br>0.100<br>0.125 | 1.713<br>1.713<br>1.713 |
|                  |        |      |          |                  |            |                |                |                |                |                |                |                |                  |             |                         |                         |                         |                         |                         |                         |                         |
| 2.5              |        | 0.35 |          | 4h<br>6g         | 0<br>0.019 | 2.500<br>2.481 | 0.053<br>0.085 | 2.447<br>2.396 | 2.273<br>2.254 | 0.040<br>0.063 | 2.233<br>2.191 | 2.017<br>1.975 | 4H<br>5H<br>6H   | 0<br>0<br>0 | 2.500<br>2.500<br>2.500 | 2.326<br>2.340<br>2.358 | 0.053<br>0.067<br>0.085 | 2.273<br>2.273<br>2.273 | 2.184<br>2.201<br>2.221 | 0.063<br>0.080<br>0.100 | 2.121<br>2.121<br>2.121 |
|                  | 0.45   |      |          | 4h<br>6g         | 0<br>0.020 | 2.500<br>2.480 | 0.063<br>0.100 | 2.437<br>2.380 | 2.208<br>2.188 | 0.045<br>0.071 | 2.163<br>2.117 | 1.885<br>1.839 | 4H<br>5H<br>6H   | 0<br>0<br>0 | 2.500<br>2.500<br>2.500 | 2.268<br>2.283<br>2.303 | 0.060<br>0.075<br>0.095 | 2.208<br>2.208<br>2.208 | 2.093<br>2.113<br>2.138 | 0.080<br>0.100<br>0.125 | 2.013<br>2.013<br>2.013 |
|                  |        |      |          |                  |            |                |                |                |                |                |                |                |                  |             |                         |                         |                         |                         |                         |                         |                         |
| 3                |        | 0.35 |          | 4h<br>6g         | 0<br>0.019 | 3.000<br>2.981 | 0.053<br>0.085 | 2.947<br>2.896 | 2.773<br>2.754 | 0.042<br>0.067 | 2.731<br>2.687 | 2.515<br>2.471 | 4H<br>5H<br>6H   | 0<br>0<br>0 | 3.000<br>3.000<br>3.000 | 2.829<br>2.844<br>2.863 | 0.056<br>0.071<br>0.090 | 2.773<br>2.773<br>2.773 | 2.684<br>2.701<br>2.721 | 0.063<br>0.080<br>0.100 | 2.621<br>2.621<br>2.621 |
|                  | 0.5    |      |          | 4h<br>6g         | 0<br>0.020 | 3.000<br>2.980 | 0.067<br>0.106 | 2.933<br>2.874 | 2.675<br>2.655 | 0.048<br>0.075 | 2.627<br>2.580 | 2.319<br>2.272 | 5H<br>6H<br>7H   | 0<br>0<br>0 | 3.000<br>3.000<br>3.000 | 2.755<br>2.775<br>2.800 | 0.080<br>0.100<br>0.125 | 2.675<br>2.675<br>2.675 | 2.571<br>2.599<br>2.639 | 0.112<br>0.140<br>0.180 | 2.459<br>2.459<br>2.459 |
|                  |        |      |          |                  |            |                |                |                |                |                |                |                |                  |             |                         |                         |                         |                         |                         |                         |                         |



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6          | 7              | 8              | 9              | 10             | 11             | 12             | 13             | 14               | 15             | 16                      | 17                      | 18                      | 19                      | 20                      | 21                      | 22                      |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
|------------------|--------|------|----------|------------------|------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Nominal diameter | Pitch  |      |          | External threads |            |                |                |                |                |                |                |                | Internal threads |                |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund. dev. | Major diameter |                |                | Pitch diameter |                |                | Minor diameter | Tolerance class  | Fund. dev.     | Major diameter          | Pitch diameter          |                         |                         | Minor diameter          |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
|                  |        |      |          |                  |            | max.           | tol.           | min.           | max.           | tol.           | min.           |                |                  |                |                         | min.                    | max.                    | tol.                    | min.                    |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
|                  |        |      |          |                  |            |                |                |                |                |                |                |                |                  |                |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
| 3.5              |        | 0.35 |          | 4h<br>6g         | 0<br>0.019 | 3.500<br>3.481 | 0.053<br>0.085 | 3.447<br>3.396 | 3.273<br>3.254 | 0.042<br>0.067 | 3.231<br>3.187 | 3.015<br>2.971 | 4H<br>5H<br>6H   | 0<br>0<br>0    | 3.500<br>3.500<br>3.500 | 3.329<br>3.344<br>3.363 | 0.056<br>0.071<br>0.090 | 3.273<br>3.273<br>3.273 | 3.184<br>3.201<br>3.221 | 0.063<br>0.080<br>0.100 | 3.121<br>3.121<br>3.121 |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
|                  |        |      |          | 0.6              |            |                | 4h<br>6g       | 0<br>0.021     | 3.500<br>3.479 | 0.080<br>0.125 | 3.420<br>3.354 | 3.110<br>3.089 | 0.053<br>0.085   | 3.057<br>3.004 | 2.688<br>2.635          | 5H<br>6H<br>7H          | 0<br>0<br>0             | 3.500<br>3.500<br>3.500 | 3.200<br>3.222<br>3.250 | 0.090<br>0.112<br>0.140 | 3.110<br>3.110<br>3.110 | 2.975<br>3.010<br>3.050 | 0.125<br>0.160<br>0.200 | 2.850<br>2.850<br>2.850 |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
|                  |        |      |          |                  |            |                | 4              |                | 0.5            |                |                | 4h<br>6g       | 0<br>0.020       | 4.000<br>3.980 | 0.067<br>0.106          | 3.933<br>3.874          | 3.675<br>3.655          | 0.048<br>0.075          | 3.627<br>3.580          | 3.319<br>3.272          | 5H<br>6H<br>7H          | 0<br>0<br>0             | 4.000<br>4.000<br>4.000 | 3.755<br>3.775<br>3.800 | 0.080<br>0.100<br>0.125 | 3.675<br>3.675<br>3.675 | 3.571<br>3.599<br>3.639 | 0.112<br>0.140<br>0.180 | 3.459<br>3.459<br>3.459 |                         |                         |                         |                         |                         |
|                  | 0.7    |      |          |                  |            |                |                |                |                |                |                |                |                  | 4h<br>6g       | 0<br>0.022              | 4.000<br>3.978          | 0.090<br>0.140          | 3.910<br>3.838          | 3.545<br>3.523          | 0.056<br>0.090          | 3.489<br>3.433          | 3.058<br>3.002          | 5H<br>6H<br>7H          | 0<br>0<br>0             | 4.000<br>4.000<br>4.000 | 3.640<br>3.663<br>3.695 | 0.095<br>0.118<br>0.150 | 3.545<br>3.545<br>3.545 | 3.382<br>3.422<br>3.466 | 0.140<br>0.180<br>0.224 | 3.242<br>3.242<br>3.242 |                         |                         |                         |
|                  |        |      |          | 4.5              |            | 0.5            |                |                |                |                |                |                |                  |                |                         |                         |                         | 4h<br>6g                | 0<br>0.020              | 4.500<br>4.480          | 0.067<br>0.106          | 4.433<br>4.374          | 4.175<br>4.155          | 0.048<br>0.075          | 4.127<br>4.080          | 3.819<br>3.772          | 5H<br>6H<br>7H          | 0<br>0<br>0             | 4.500<br>4.500<br>4.500 | 4.255<br>4.275<br>4.300 | 0.080<br>0.100<br>0.125 | 4.175<br>4.175<br>4.175 | 4.071<br>4.099<br>4.139 | 0.112<br>0.140<br>0.180 |
|                  |        |      |          |                  |            |                | 0.75           |                |                |                |                |                |                  |                |                         |                         |                         |                         |                         | 4h<br>6g                | 0<br>0.022              | 4.500<br>4.478          | 0.090<br>0.140          | 4.410<br>4.338          | 4.013<br>3.991          | 0.056<br>0.090          | 3.957<br>3.901          | 3.495<br>3.439          | 5H<br>6H<br>7H          | 0<br>0<br>0             | 4.500<br>4.500<br>4.500 | 4.108<br>4.131<br>4.163 | 0.095<br>0.118<br>0.150 | 4.013<br>4.013<br>4.013 |
| 5                |        | 0.5  |          |                  |            |                |                |                |                |                |                |                |                  |                |                         |                         |                         |                         |                         |                         | 4h<br>6g                | 0<br>0.020              | 5.000<br>4.980          | 0.067<br>0.106          | 4.933<br>4.874          | 4.675<br>4.655          | 0.048<br>0.075          | 4.627<br>4.580          | 4.319<br>4.272          | 5H<br>6H<br>7H          | 0<br>0<br>0             | 5.000<br>5.000<br>5.000 | 4.755<br>4.775<br>4.800 | 0.080<br>0.100<br>0.125 |
|                  |        |      |          | 0.8              |            |                |                |                |                |                |                |                |                  |                |                         |                         |                         |                         |                         |                         | 4h<br>6g                | 0<br>0.024              | 5.000<br>4.976          | 0.095<br>0.150          | 4.905<br>4.826          | 4.480<br>4.456          | 0.060<br>0.095          | 4.420<br>4.361          | 3.927<br>3.868          | 5H<br>6H<br>7H          | 0<br>0<br>0             | 5.000<br>5.000<br>5.000 | 4.580<br>4.605<br>4.640 | 0.100<br>0.125<br>0.160 |
|                  |        |      |          |                  |            |                | 5.5            |                | 0.5            |                |                |                |                  |                |                         |                         |                         |                         |                         |                         |                         |                         | 4h<br>6g                | 0<br>0.020              | 5.500<br>5.480          | 0.067<br>0.106          | 5.433<br>5.374          | 5.175<br>5.155          | 0.048<br>0.075          | 5.127<br>5.080          | 4.819<br>4.772          | 5H<br>6H<br>7H          | 0<br>0<br>0             | 5.500<br>5.500<br>5.500 |



BS 2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

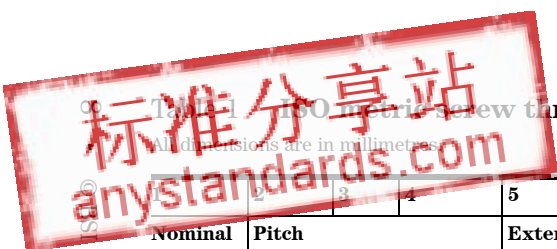
|                  | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9     | 10             | 11    | 12    | 13             | 14               | 15        | 16             | 17             | 18    | 19    | 20             | 21    | 22    |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|-------|----------------|-------|-------|----------------|------------------|-----------|----------------|----------------|-------|-------|----------------|-------|-------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |       |                |       |       |                | Internal threads |           |                |                |       |       |                |       |       |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |       | Pitch diameter |       |       | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |       | Minor diameter |       |       |
|                  |        |      |          |                  |           | max.           | tol.  | min.  | max.           | tol.  | min.  |                |                  |           |                | min.           | max.  | tol.  | min.           |       |       |
| 6                |        | 0.75 |          | 4h               | 0         | 6.000          | 0.090 | 5.910 | 5.513          | 0.063 | 5.450 | 4.988          | 5H               | 0         | 6.000          | 5.619          | 0.106 | 5.513 | 5.338          | 0.150 | 5.188 |
|                  |        |      |          | 6g               | 0.022     | 5.978          | 0.140 | 5.838 | 5.491          | 0.100 | 5.391 | 4.929          | 6H               | 0         | 6.000          | 5.645          | 0.132 | 5.513 | 5.378          | 0.190 | 5.188 |
|                  |        |      |          |                  |           |                |       |       |                |       |       |                | 7H               | 0         | 6.000          | 5.683          | 0.170 | 5.513 | 5.424          | 0.236 | 5.188 |
|                  | 1      |      |          | 4h               | 0         | 6.000          | 0.112 | 5.888 | 5.350          | 0.071 | 5.279 | 4.663          | 5H               | 0         | 6.000          | 5.468          | 0.118 | 5.350 | 5.107          | 0.190 | 4.917 |
|                  |        |      |          | 6g               | 0.026     | 5.974          | 0.180 | 5.794 | 5.324          | 0.112 | 5.212 | 4.597          | 6H               | 0         | 6.000          | 5.500          | 0.150 | 5.350 | 5.153          | 0.236 | 4.917 |
|                  |        |      |          | 8g               | 0.026     | 5.974          | 0.280 | 5.694 | 5.324          | 0.180 | 5.144 | 4.528          | 7H               | 0         | 6.000          | 5.540          | 0.190 | 5.350 | 5.217          | 0.300 | 4.917 |
| 7                |        | 0.75 |          | 4h               | 0         | 7.000          | 0.090 | 6.910 | 6.513          | 0.063 | 6.450 | 5.988          | 5H               | 0         | 7.000          | 6.619          | 0.106 | 6.513 | 6.338          | 0.150 | 6.188 |
|                  |        |      |          | 6g               | 0.022     | 6.978          | 0.140 | 6.838 | 6.491          | 0.100 | 6.391 | 5.929          | 6H               | 0         | 7.000          | 6.645          | 0.132 | 6.513 | 6.378          | 0.190 | 6.188 |
|                  |        |      |          |                  |           |                |       |       |                |       |       |                | 7H               | 0         | 7.000          | 6.683          | 0.170 | 6.513 | 6.424          | 0.236 | 6.188 |
|                  | 1      |      |          | 4h               | 0         | 7.000          | 0.112 | 6.888 | 6.350          | 0.071 | 6.279 | 5.663          | 5H               | 0         | 7.000          | 6.468          | 0.118 | 6.350 | 6.107          | 0.190 | 5.917 |
|                  |        |      |          | 6g               | 0.026     | 6.974          | 0.180 | 6.794 | 6.324          | 0.112 | 6.212 | 5.596          | 6H               | 0         | 7.000          | 6.500          | 0.150 | 6.350 | 6.153          | 0.236 | 5.917 |
|                  |        |      |          | 8g               | 0.026     | 6.974          | 0.280 | 6.694 | 6.324          | 0.180 | 6.144 | 5.528          | 7H               | 0         | 7.000          | 6.540          | 0.190 | 6.350 | 6.217          | 0.300 | 5.917 |
| 8                |        | 0.75 |          | 4h               | 0         | 8.000          | 0.090 | 7.910 | 7.513          | 0.063 | 7.450 | 6.988          | 5H               | 0         | 8.000          | 7.619          | 0.106 | 7.513 | 7.338          | 0.150 | 7.188 |
|                  |        |      |          | 6g               | 0.022     | 7.978          | 0.140 | 7.838 | 7.491          | 0.100 | 7.391 | 6.929          | 6H               | 0         | 8.000          | 7.645          | 0.132 | 7.513 | 7.378          | 0.190 | 7.188 |
|                  |        |      |          |                  |           |                |       |       |                |       |       |                | 7H               | 0         | 8.000          | 7.683          | 0.170 | 7.513 | 7.424          | 0.236 | 7.188 |
|                  |        | 1    |          | 4h               | 0         | 8.000          | 0.112 | 7.888 | 7.350          | 0.071 | 7.279 | 6.663          | 5H               | 0         | 8.000          | 7.468          | 0.118 | 7.350 | 7.107          | 0.190 | 6.917 |
|                  |        |      |          | 6g               | 0.026     | 7.974          | 0.180 | 7.794 | 7.324          | 0.112 | 7.212 | 6.596          | 6H               | 0         | 8.000          | 7.500          | 0.150 | 7.350 | 7.153          | 0.236 | 6.917 |
|                  |        |      |          | 8g               | 0.026     | 7.974          | 0.280 | 7.694 | 7.324          | 0.180 | 7.144 | 6.528          | 7H               | 0         | 8.000          | 7.540          | 0.190 | 7.350 | 7.217          | 0.300 | 6.917 |
|                  | 1.25   |      |          | 4h               | 0         | 8.000          | 0.132 | 7.868 | 7.188          | 0.075 | 7.113 | 6.343          | 5H               | 0         | 8.000          | 7.313          | 0.125 | 7.188 | 6.859          | 0.212 | 6.647 |
|                  |        |      |          | 6g               | 0.028     | 7.972          | 0.212 | 7.760 | 7.160          | 0.118 | 7.042 | 6.272          | 6H               | 0         | 8.000          | 7.348          | 0.160 | 7.188 | 6.912          | 0.265 | 6.647 |
|                  |        |      |          | 8g               | 0.028     | 7.972          | 0.335 | 7.637 | 7.160          | 0.190 | 6.970 | 6.200          | 7H               | 0         | 8.000          | 7.388          | 0.200 | 7.188 | 6.982          | 0.335 | 6.647 |
| 9                |        | 0.75 |          | 4h               | 0         | 9.000          | 0.090 | 8.910 | 8.513          | 0.063 | 8.450 | 7.988          | 5H               | 0         | 9.000          | 8.619          | 0.106 | 8.513 | 8.338          | 0.150 | 8.188 |
|                  |        |      |          | 6g               | 0.022     | 8.978          | 0.140 | 8.838 | 8.491          | 0.100 | 8.391 | 7.929          | 6H               | 0         | 9.000          | 8.645          | 0.132 | 8.513 | 8.378          | 0.190 | 8.188 |
|                  |        |      |          |                  |           |                |       |       |                |       |       |                | 7H               | 0         | 9.000          | 8.683          | 0.170 | 8.513 | 8.424          | 0.236 | 8.188 |
|                  |        | 1    |          | 4h               | 0         | 9.000          | 0.112 | 8.888 | 8.350          | 0.071 | 8.279 | 7.663          | 5H               | 0         | 9.000          | 8.468          | 0.118 | 8.350 | 8.107          | 0.190 | 7.917 |
|                  |        |      |          | 6g               | 0.026     | 8.974          | 0.180 | 8.794 | 8.324          | 0.112 | 8.212 | 7.596          | 6H               | 0         | 9.000          | 8.500          | 0.150 | 8.350 | 8.153          | 0.236 | 7.917 |
|                  |        |      |          | 8g               | 0.026     | 8.974          | 0.280 | 8.694 | 8.324          | 0.180 | 8.144 | 7.528          | 7H               | 0         | 9.000          | 8.540          | 0.190 | 8.350 | 8.217          | 0.300 | 7.917 |
|                  | 1.25   |      |          | 4h               | 0         | 9.000          | 0.132 | 8.868 | 8.188          | 0.075 | 8.113 | 7.343          | 5H               | 0         | 9.000          | 8.313          | 0.125 | 8.188 | 7.859          | 0.212 | 7.647 |
|                  |        |      |          | 6g               | 0.028     | 8.972          | 0.212 | 8.760 | 8.160          | 0.118 | 8.042 | 7.272          | 6H               | 0         | 9.000          | 8.348          | 0.160 | 8.188 | 7.912          | 0.265 | 7.647 |
|                  |        |      |          | 8g               | 0.028     | 8.972          | 0.335 | 8.637 | 8.160          | 0.190 | 7.970 | 7.200          | 7H               | 0         | 9.000          | 8.388          | 0.200 | 8.188 | 7.982          | 0.335 | 7.647 |

BS 3643-2:2007



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9      | 10             | 11    | 12     | 13             | 14               | 15        | 16             | 17             | 18    | 19     | 20             | 21    | 22     |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           |       |        |
|                  |        |      |          |                  |           |                |       |        |                |       |        |                |                  |           |                |                |       |        |                |       |        |
| 10               |        |      | 0.75     | 4h               | 0         | 10.000         | 0.090 | 9.910  | 9.513          | 0.063 | 9.450  | 8.988          | 5H               | 0         | 10.000         | 9.619          | 0.106 | 9.513  | 9.338          | 0.150 | 9.188  |
|                  |        |      |          | 6g               | 0.022     | 9.978          | 0.140 | 9.838  | 9.491          | 0.100 | 9.391  | 8.929          | 6H               | 0         | 10.000         | 9.645          | 0.132 | 9.513  | 9.378          | 0.190 | 9.188  |
|                  |        |      |          |                  |           |                |       |        |                |       |        |                | 7H               | 0         | 10.000         | 9.683          | 0.170 | 9.513  | 9.424          | 0.236 | 9.188  |
|                  |        |      | 1        | 4h               | 0         | 10.000         | 0.112 | 9.888  | 9.350          | 0.071 | 9.279  | 8.663          | 5H               | 0         | 10.000         | 9.468          | 0.118 | 9.350  | 9.107          | 0.190 | 8.917  |
|                  |        |      |          | 6g               | 0.026     | 9.974          | 0.180 | 9.794  | 9.324          | 0.112 | 9.212  | 8.596          | 6H               | 0         | 10.000         | 9.500          | 0.150 | 9.350  | 9.153          | 0.236 | 8.917  |
|                  |        |      |          | 8g               | 0.026     | 9.974          | 0.280 | 9.694  | 9.324          | 0.180 | 9.144  | 8.528          | 7H               | 0         | 10.000         | 9.540          | 0.190 | 9.350  | 9.217          | 0.300 | 8.917  |
|                  |        | 1.25 |          | 4h               | 0         | 10.000         | 0.132 | 9.868  | 9.188          | 0.075 | 9.113  | 8.343          | 5H               | 0         | 10.000         | 9.313          | 0.125 | 9.188  | 8.859          | 0.212 | 8.647  |
|                  |        |      |          | 6g               | 0.028     | 9.972          | 0.212 | 9.760  | 9.160          | 0.118 | 9.042  | 8.272          | 6H               | 0         | 10.000         | 9.348          | 0.160 | 9.188  | 8.912          | 0.265 | 8.647  |
|                  |        |      |          | 8g               | 0.028     | 9.972          | 0.335 | 9.637  | 9.160          | 0.190 | 8.970  | 8.200          | 7H               | 0         | 10.000         | 9.388          | 0.200 | 9.188  | 8.982          | 0.335 | 8.647  |
|                  | 1.5    |      |          | 4h               | 0         | 10.000         | 0.150 | 9.850  | 9.026          | 0.085 | 8.941  | 8.018          | 5H               | 0         | 10.000         | 9.166          | 0.140 | 9.026  | 8.612          | 0.236 | 8.376  |
|                  |        |      |          | 6g               | 0.032     | 9.968          | 0.236 | 9.732  | 8.994          | 0.132 | 8.862  | 7.938          | 6H               | 0         | 10.000         | 9.206          | 0.180 | 9.026  | 8.676          | 0.300 | 8.376  |
|                  |        |      |          | 8g               | 0.032     | 9.968          | 0.375 | 9.593  | 8.994          | 0.212 | 8.782  | 7.858          | 7H               | 0         | 10.000         | 9.250          | 0.224 | 9.026  | 8.751          | 0.375 | 8.376  |
| 11               |        |      | 0.75     | 4h               | 0         | 11.000         | 0.090 | 10.910 | 10.513         | 0.063 | 10.450 | 9.988          | 5H               | 0         | 11.000         | 10.619         | 0.106 | 10.513 | 10.338         | 0.150 | 10.188 |
|                  |        |      |          | 6g               | 0.022     | 10.978         | 0.140 | 10.838 | 10.491         | 0.100 | 10.391 | 9.929          | 6H               | 0         | 11.000         | 10.645         | 0.132 | 10.513 | 10.378         | 0.190 | 10.188 |
|                  |        |      |          |                  |           |                |       |        |                |       |        |                | 7H               | 0         | 11.000         | 10.683         | 0.170 | 10.513 | 10.424         | 0.236 | 10.188 |
|                  |        |      | 1        | 4h               | 0         | 11.000         | 0.112 | 10.888 | 10.350         | 0.071 | 10.279 | 9.663          | 5H               | 0         | 11.000         | 10.468         | 0.118 | 10.350 | 10.107         | 0.190 | 9.917  |
|                  |        |      |          | 6g               | 0.026     | 10.974         | 0.180 | 10.794 | 10.324         | 0.112 | 10.212 | 9.596          | 6H               | 0         | 11.000         | 10.500         | 0.150 | 10.350 | 10.153         | 0.236 | 9.917  |
|                  |        |      |          | 8g               | 0.026     | 10.974         | 0.280 | 10.694 | 10.324         | 0.180 | 10.144 | 9.528          | 7H               | 0         | 11.000         | 10.540         | 0.190 | 10.350 | 10.217         | 0.300 | 9.917  |
|                  | 1.5    |      |          | 4h               | 0         | 11.000         | 0.150 | 10.850 | 10.026         | 0.085 | 9.941  | 9.018          | 5H               | 0         | 11.000         | 10.166         | 0.140 | 10.026 | 9.612          | 0.236 | 9.376  |
|                  |        |      |          | 6g               | 0.032     | 10.968         | 0.236 | 10.732 | 9.994          | 0.132 | 9.862  | 8.938          | 6H               | 0         | 11.000         | 10.206         | 0.180 | 10.026 | 9.676          | 0.300 | 9.376  |
|                  |        |      |          | 8g               | 0.032     | 10.968         | 0.375 | 10.593 | 9.994          | 0.212 | 9.782  | 8.858          | 7H               | 0         | 11.000         | 10.250         | 0.224 | 10.026 | 9.751          | 0.375 | 9.376  |
|                  | 12     |      | 1        | 4h               | 0         | 12.000         | 0.112 | 11.888 | 11.350         | 0.075 | 11.275 | 10.659         | 5H               | 0         | 12.000         | 11.475         | 0.125 | 11.350 | 11.107         | 0.190 | 10.917 |
|                  |        |      |          | 6g               | 0.026     | 11.974         | 0.180 | 11.794 | 11.324         | 0.118 | 11.206 | 10.590         | 6H               | 0         | 12.000         | 11.510         | 0.160 | 11.350 | 11.153         | 0.236 | 10.917 |
|                  |        |      |          | 8g               | 0.026     | 11.974         | 0.280 | 11.694 | 11.324         | 0.190 | 11.134 | 10.518         | 7H               | 0         | 12.000         | 11.550         | 0.200 | 11.350 | 11.217         | 0.300 | 10.917 |
|                  |        | 1.25 |          | 4h               | 0         | 12.000         | 0.132 | 11.868 | 11.188         | 0.085 | 11.103 | 10.333         | 5H               | 0         | 12.000         | 11.328         | 0.140 | 11.188 | 10.859         | 0.212 | 10.647 |
|                  |        |      |          | 6g               | 0.028     | 11.972         | 0.212 | 11.760 | 11.160         | 0.132 | 11.028 | 10.257         | 6H               | 0         | 12.000         | 11.368         | 0.180 | 11.188 | 10.912         | 0.265 | 10.647 |
|                  |        |      |          | 8g               | 0.028     | 11.972         | 0.335 | 11.637 | 11.160         | 0.212 | 10.948 | 10.177         | 7H               | 0         | 12.000         | 11.412         | 0.224 | 11.188 | 10.982         | 0.335 | 10.647 |
|                  |        | 1.5  |          | 4h               | 0         | 12.000         | 0.150 | 11.850 | 11.026         | 0.090 | 10.936 | 10.012         | 5H               | 0         | 12.000         | 11.176         | 0.150 | 11.026 | 10.612         | 0.236 | 10.376 |
|                  |        |      |          | 6g               | 0.032     | 11.968         | 0.236 | 11.732 | 10.994         | 0.140 | 10.854 | 9.930          | 6H               | 0         | 12.000         | 11.216         | 0.190 | 11.026 | 10.676         | 0.300 | 10.376 |
|                  |        |      |          | 8g               | 0.032     | 11.968         | 0.375 | 11.593 | 10.994         | 0.224 | 10.770 | 9.846          | 7H               | 0         | 12.000         | 11.262         | 0.236 | 11.026 | 10.751         | 0.375 | 10.376 |
| 1.75             |        |      |          | 4h               | 0         | 12.000         | 0.170 | 11.830 | 10.863         | 0.095 | 10.768 | 9.692          | 5H               | 0         | 12.000         | 11.023         | 0.160 | 10.863 | 10.371         | 0.265 | 10.106 |
|                  |        |      |          | 6g               | 0.034     | 11.966         | 0.265 | 11.701 | 10.829         | 0.150 | 10.679 | 9.602          | 6H               | 0         | 12.000         | 11.063         | 0.200 | 10.863 | 10.441         | 0.335 | 10.106 |
|                  |        |      |          | 8g               | 0.034     | 11.966         | 0.425 | 11.541 | 10.829         | 0.236 | 10.593 | 9.516          | 7H               | 0         | 12.000         | 11.113         | 0.250 | 10.863 | 10.531         | 0.425 | 10.106 |



2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 1      | 2    | 3        | 4                | 5         | 6              | 7      | 8      | 9              | 10     | 11     | 12             | 13               | 14        | 15             | 16             | 17     | 18     | 19             | 20     | 21     | 22   |  |
|------------------|--------|------|----------|------------------|-----------|----------------|--------|--------|----------------|--------|--------|----------------|------------------|-----------|----------------|----------------|--------|--------|----------------|--------|--------|------|--|
| Nominal diameter | Pitch  |      |          | External threads |           |                |        |        |                |        |        |                | Internal threads |           |                |                |        |        |                |        |        |      |  |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |        |        | Pitch diameter |        |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |        |        | Minor diameter |        |        |      |  |
|                  |        |      |          |                  |           | max.           | tol.   | min.   | max.           | tol.   | min.   |                |                  |           |                | min.           | max.   | tol.   | min.           | max.   | tol.   | min. |  |
| 14               |        |      | 1        | 4h               | 0         | 14.000         | 0.112  | 13.888 | 13.350         | 0.075  | 13.275 | 12.659         | 5H               | 0         | 14.000         | 13.475         | 0.125  | 13.350 | 13.107         | 0.190  | 12.917 |      |  |
|                  |        |      |          | 6g               | 0.026     | 13.974         | 0.180  | 13.794 | 13.324         | 0.118  | 13.206 | 12.590         | 6H               | 0         | 14.000         | 13.510         | 0.160  | 13.350 | 13.153         | 0.236  | 12.917 |      |  |
|                  |        |      |          | 8g               | 0.026     | 13.974         | 0.280  | 13.694 | 13.324         | 0.190  | 13.134 | 12.518         | 7H               | 0         | 14.000         | 13.550         | 0.200  | 13.350 | 13.217         | 0.300  | 12.917 |      |  |
|                  |        |      | 1.25     | 4h               | 0         | 14.000         | 0.132  | 13.868 | 13.188         | 0.085  | 13.103 | 12.333         | 5H               | 0         | 14.000         | 13.328         | 0.140  | 13.188 | 12.859         | 0.212  | 12.647 |      |  |
|                  |        |      |          | 6g               | 0.028     | 13.972         | 0.212  | 13.760 | 13.160         | 0.132  | 13.028 | 12.257         | 6H               | 0         | 14.000         | 13.368         | 0.180  | 13.188 | 12.912         | 0.265  | 12.647 |      |  |
|                  |        |      |          | 8g               | 0.028     | 13.972         | 0.335  | 13.637 | 13.160         | 0.212  | 12.948 | 12.177         | 7H               | 0         | 14.000         | 13.412         | 0.224  | 13.188 | 12.982         | 0.335  | 12.647 |      |  |
|                  |        | 1.5  |          | 4h               | 0         | 14.000         | 0.150  | 13.850 | 13.026         | 0.090  | 12.936 | 12.012         | 5H               | 0         | 14.000         | 13.176         | 0.150  | 13.026 | 12.612         | 0.236  | 12.376 |      |  |
|                  |        |      |          | 6g               | 0.032     | 13.968         | 0.236  | 13.732 | 12.994         | 0.140  | 12.854 | 11.930         | 6H               | 0         | 14.000         | 13.216         | 0.190  | 13.026 | 12.676         | 0.300  | 12.376 |      |  |
|                  |        |      |          | 8g               | 0.032     | 13.968         | 0.375  | 13.593 | 12.994         | 0.224  | 12.770 | 11.846         | 7H               | 0         | 14.000         | 13.262         | 0.236  | 13.026 | 12.751         | 0.375  | 12.376 |      |  |
|                  | 2      |      |          | 4h               | 0         | 14.000         | 0.180  | 13.820 | 12.701         | 0.100  | 12.601 | 11.369         | 5H               | 0         | 14.000         | 12.871         | 0.170  | 12.701 | 12.135         | 0.300  | 11.835 |      |  |
|                  |        |      |          | 6g               | 0.038     | 13.962         | 0.280  | 13.682 | 12.663         | 0.160  | 12.503 | 11.271         | 6H               | 0         | 14.000         | 12.913         | 0.212  | 12.701 | 12.210         | 0.375  | 11.835 |      |  |
|                  |        |      |          | 8g               | 0.038     | 13.962         | 0.450  | 13.512 | 12.663         | 0.250  | 12.413 | 11.181         | 7H               | 0         | 14.000         | 12.966         | 0.265  | 12.701 | 12.310         | 0.475  | 11.835 |      |  |
| 15               |        |      | 1        | 4h               | 0         | 15.000         | 0.112  | 14.888 | 14.350         | 0.075  | 14.275 | 13.659         | 5H               | 0         | 15.000         | 14.475         | 0.125  | 14.350 | 14.107         | 0.190  | 13.917 |      |  |
|                  |        |      |          | 6g               | 0.026     | 14.974         | 0.180  | 14.794 | 14.324         | 0.118  | 14.206 | 13.590         | 6H               | 0         | 15.000         | 14.510         | 0.160  | 14.350 | 14.153         | 0.236  | 13.917 |      |  |
|                  |        |      |          | 8g               | 0.026     | 14.974         | 0.280  | 14.694 | 14.324         | 0.190  | 14.134 | 13.518         | 7H               | 0         | 15.000         | 14.550         | 0.200  | 14.350 | 14.217         | 0.300  | 13.917 |      |  |
|                  |        | 1.5  |          | 4h               | 0         | 15.000         | 0.150  | 14.850 | 14.026         | 0.090  | 13.936 | 13.012         | 5H               | 0         | 15.000         | 14.176         | 0.150  | 14.026 | 13.612         | 0.236  | 13.376 |      |  |
|                  |        |      |          | 6g               | 0.032     | 14.968         | 0.236  | 14.732 | 13.994         | 0.140  | 13.854 | 12.930         | 6H               | 0         | 15.000         | 14.216         | 0.190  | 14.026 | 13.676         | 0.300  | 13.376 |      |  |
|                  |        |      |          | 8g               | 0.032     | 14.968         | 0.375  | 14.593 | 13.994         | 0.224  | 13.770 | 12.846         | 7H               | 0         | 15.000         | 14.262         | 0.236  | 14.026 | 13.751         | 0.375  | 13.376 |      |  |
|                  |        | 1.5  |          | 4h               | 0         | 16.000         | 0.112  | 15.888 | 15.350         | 0.075  | 15.275 | 14.659         | 5H               | 0         | 16.000         | 15.475         | 0.125  | 15.350 | 15.107         | 0.190  | 14.917 |      |  |
|                  |        |      |          | 6g               | 0.026     | 15.974         | 0.180  | 15.794 | 15.324         | 0.118  | 15.206 | 14.590         | 6H               | 0         | 16.000         | 15.510         | 0.160  | 15.350 | 15.153         | 0.236  | 14.917 |      |  |
|                  |        |      |          | 8g               | 0.026     | 15.974         | 0.280  | 15.694 | 15.324         | 0.190  | 15.134 | 14.518         | 7H               | 0         | 16.000         | 15.550         | 0.200  | 15.350 | 15.217         | 0.300  | 14.917 |      |  |
| 2                |        |      | 4h       | 0                | 16.000    | 0.150          | 15.850 | 15.026 | 0.090          | 14.936 | 14.012 | 5H             | 0                | 16.000    | 15.176         | 0.150          | 15.026 | 14.612 | 0.236          | 14.376 |        |      |  |
|                  |        |      | 6g       | 0.032            | 15.968    | 0.236          | 15.732 | 14.994 | 0.140          | 14.854 | 13.930 | 6H             | 0                | 16.000    | 15.216         | 0.190          | 15.026 | 14.676 | 0.300          | 14.376 |        |      |  |
|                  |        |      | 8g       | 0.032            | 15.968    | 0.375          | 15.593 | 14.994 | 0.224          | 14.770 | 13.846 | 7H             | 0                | 16.000    | 15.262         | 0.236          | 15.026 | 14.751 | 0.375          | 14.376 |        |      |  |
| 16               |        |      | 1        | 4h               | 0         | 16.000         | 0.112  | 15.888 | 15.350         | 0.075  | 15.275 | 14.659         | 5H               | 0         | 16.000         | 15.475         | 0.125  | 15.350 | 15.107         | 0.190  | 14.917 |      |  |
|                  |        |      |          | 6g               | 0.026     | 15.974         | 0.180  | 15.794 | 15.324         | 0.118  | 15.206 | 14.590         | 6H               | 0         | 16.000         | 15.510         | 0.160  | 15.350 | 15.153         | 0.236  | 14.917 |      |  |
|                  |        |      |          | 8g               | 0.026     | 15.974         | 0.280  | 15.694 | 15.324         | 0.190  | 15.134 | 14.518         | 7H               | 0         | 16.000         | 15.550         | 0.200  | 15.350 | 15.217         | 0.300  | 14.917 |      |  |
|                  |        | 1.5  |          | 4h               | 0         | 16.000         | 0.150  | 15.850 | 15.026         | 0.090  | 14.936 | 14.012         | 5H               | 0         | 16.000         | 15.176         | 0.150  | 15.026 | 14.612         | 0.236  | 14.376 |      |  |
|                  |        |      |          | 6g               | 0.032     | 15.968         | 0.236  | 15.732 | 14.994         | 0.140  | 14.854 | 13.930         | 6H               | 0         | 16.000         | 15.216         | 0.190  | 15.026 | 14.676         | 0.300  | 14.376 |      |  |
|                  |        |      |          | 8g               | 0.032     | 15.968         | 0.375  | 15.593 | 14.994         | 0.224  | 14.770 | 13.846         | 7H               | 0         | 16.000         | 15.262         | 0.236  | 15.026 | 14.751         | 0.375  | 14.376 |      |  |
|                  | 2      |      |          | 4h               | 0         | 16.000         | 0.180  | 15.820 | 14.701         | 0.100  | 14.601 | 13.369         | 5H               | 0         | 16.000         | 14.871         | 0.170  | 14.701 | 14.135         | 0.300  | 13.835 |      |  |
|                  |        |      |          | 6g               | 0.038     | 15.962         | 0.280  | 15.682 | 14.663         | 0.160  | 14.503 | 13.271         | 6H               | 0         | 16.000         | 14.913         | 0.212  | 14.701 | 14.210         | 0.375  | 13.835 |      |  |
|                  |        |      |          | 8g               | 0.038     | 15.962         | 0.450  | 15.512 | 14.663         | 0.250  | 14.413 | 13.181         | 7H               | 0         | 16.000         | 14.966         | 0.265  | 14.701 | 14.310         | 0.475  | 13.835 |      |  |
| 17               |        |      | 1        | 4h               | 0         | 17.000         | 0.112  | 16.888 | 16.350         | 0.075  | 16.275 | 15.659         | 5H               | 0         | 17.000         | 16.475         | 0.125  | 16.350 | 16.107         | 0.190  | 15.917 |      |  |
|                  |        |      |          | 6g               | 0.026     | 16.974         | 0.180  | 16.794 | 16.324         | 0.118  | 16.206 | 15.590         | 6H               | 0         | 17.000         | 16.510         | 0.160  | 16.350 | 16.153         | 0.236  | 15.917 |      |  |
|                  |        |      |          | 8g               | 0.026     | 16.974         | 0.280  | 16.694 | 16.324         | 0.190  | 16.134 | 15.518         | 7H               | 0         | 17.000         | 16.550         | 0.200  | 16.350 | 16.217         | 0.300  | 15.917 |      |  |
|                  |        | 1.5  |          | 4h               | 0         | 17.000         | 0.150  | 16.850 | 16.026         | 0.090  | 15.936 | 15.012         | 5H               | 0         | 17.000         | 16.176         | 0.150  | 16.026 | 15.612         | 0.236  | 15.376 |      |  |
|                  |        |      |          | 6g               | 0.032     | 16.968         | 0.236  | 16.732 | 15.994         | 0.140  | 15.854 | 14.930         | 6H               | 0         | 17.000         | 16.216         | 0.190  | 16.026 | 15.676         | 0.300  | 15.376 |      |  |
|                  |        |      |          | 8g               | 0.032     | 16.968         | 0.375  | 16.593 | 15.994         | 0.224  | 15.770 | 14.846         | 7H               | 0         | 17.000         | 16.262         | 0.236  | 16.026 | 15.751         | 0.375  | 15.376 |      |  |



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9      | 10             | 11    | 12     | 13             | 14               | 15        | 16             | 17             | 18    | 19     | 20             | 21    | 22     |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           |       |        |
|                  |        |      |          |                  |           |                |       |        |                |       |        |                |                  |           |                |                |       |        |                |       |        |
| 18               |        |      | 1        | 4h               | 0         | 18.000         | 0.112 | 17.888 | 17.350         | 0.075 | 17.275 | 16.659         | 5H               | 0         | 18.000         | 17.475         | 0.125 | 17.350 | 17.107         | 0.190 | 16.917 |
|                  |        |      |          | 6g               | 0.026     | 17.974         | 0.180 | 17.794 | 17.324         | 0.118 | 17.206 | 16.590         | 6H               | 0         | 18.000         | 17.510         | 0.160 | 17.350 | 17.153         | 0.236 | 16.917 |
|                  |        |      |          | 8g               | 0.026     | 17.974         | 0.280 | 17.694 | 17.324         | 0.190 | 17.134 | 16.518         | 7H               | 0         | 18.000         | 17.550         | 0.200 | 17.350 | 17.217         | 0.300 | 16.917 |
|                  |        | 1.5  |          | 4h               | 0         | 18.000         | 0.150 | 17.850 | 17.026         | 0.090 | 16.936 | 16.012         | 5H               | 0         | 18.000         | 17.176         | 0.150 | 17.026 | 16.612         | 0.236 | 16.376 |
|                  |        |      |          | 6g               | 0.032     | 17.968         | 0.236 | 17.732 | 16.994         | 0.140 | 16.854 | 15.930         | 6H               | 0         | 18.000         | 17.216         | 0.190 | 17.026 | 16.676         | 0.300 | 16.376 |
|                  |        |      |          | 8g               | 0.032     | 17.968         | 0.375 | 17.593 | 16.994         | 0.224 | 16.770 | 15.846         | 7H               | 0         | 18.000         | 17.262         | 0.236 | 17.026 | 16.751         | 0.375 | 16.376 |
|                  |        |      | 2        | 4h               | 0         | 18.000         | 0.180 | 17.820 | 16.701         | 0.100 | 16.601 | 15.369         | 5H               | 0         | 18.000         | 16.871         | 0.170 | 16.701 | 16.135         | 0.300 | 15.835 |
|                  |        |      |          | 6g               | 0.038     | 17.962         | 0.280 | 17.682 | 16.663         | 0.160 | 16.503 | 15.271         | 6H               | 0         | 18.000         | 16.913         | 0.212 | 16.701 | 16.210         | 0.375 | 15.835 |
|                  |        |      |          | 8g               | 0.038     | 17.962         | 0.450 | 17.512 | 16.663         | 0.250 | 16.413 | 15.181         | 7H               | 0         | 18.000         | 16.966         | 0.265 | 16.701 | 16.310         | 0.475 | 15.835 |
|                  | 2.5    |      |          | 4h               | 0         | 18.000         | 0.212 | 17.788 | 16.376         | 0.106 | 16.270 | 14.730         | 5H               | 0         | 18.000         | 16.556         | 0.180 | 16.376 | 15.649         | 0.355 | 15.294 |
|                  |        |      |          | 6g               | 0.042     | 17.958         | 0.335 | 17.623 | 16.334         | 0.170 | 16.164 | 14.624         | 6H               | 0         | 18.000         | 16.600         | 0.224 | 16.376 | 15.744         | 0.450 | 15.294 |
|                  |        |      |          | 8g               | 0.042     | 17.958         | 0.530 | 17.428 | 16.334         | 0.265 | 16.069 | 14.529         | 7H               | 0         | 18.000         | 16.656         | 0.280 | 16.376 | 15.854         | 0.560 | 15.294 |
| 20               |        |      | 1        | 4h               | 0         | 20.000         | 0.112 | 19.888 | 19.350         | 0.075 | 19.275 | 18.659         | 5H               | 0         | 20.000         | 19.475         | 0.125 | 19.350 | 19.107         | 0.190 | 18.917 |
|                  |        |      |          | 6g               | 0.026     | 19.974         | 0.180 | 19.794 | 19.324         | 0.118 | 19.206 | 18.590         | 6H               | 0         | 20.000         | 19.510         | 0.160 | 19.350 | 19.153         | 0.236 | 18.917 |
|                  |        |      |          | 8g               | 0.026     | 19.974         | 0.280 | 19.694 | 19.324         | 0.190 | 19.134 | 18.518         | 7H               | 0         | 20.000         | 19.550         | 0.200 | 19.350 | 19.217         | 0.300 | 18.917 |
|                  |        | 1.5  |          | 4h               | 0         | 20.000         | 0.150 | 19.850 | 19.026         | 0.090 | 18.936 | 18.012         | 5H               | 0         | 20.000         | 19.176         | 0.150 | 19.026 | 18.612         | 0.236 | 18.376 |
|                  |        |      |          | 6g               | 0.032     | 19.968         | 0.236 | 19.732 | 18.994         | 0.140 | 18.854 | 17.930         | 6H               | 0         | 20.000         | 19.216         | 0.190 | 19.026 | 18.676         | 0.300 | 18.376 |
|                  |        |      |          | 8g               | 0.032     | 19.968         | 0.375 | 19.593 | 18.994         | 0.224 | 18.770 | 17.846         | 7H               | 0         | 20.000         | 19.262         | 0.236 | 19.026 | 18.751         | 0.375 | 18.376 |
|                  |        |      | 2        | 4h               | 0         | 20.000         | 0.180 | 19.820 | 18.701         | 0.100 | 18.601 | 17.369         | 5H               | 0         | 20.000         | 18.871         | 0.170 | 18.701 | 18.135         | 0.300 | 17.835 |
|                  |        |      |          | 6g               | 0.038     | 19.962         | 0.280 | 19.682 | 18.663         | 0.160 | 18.503 | 17.271         | 6H               | 0         | 20.000         | 18.913         | 0.212 | 18.701 | 18.210         | 0.375 | 17.835 |
|                  |        |      |          | 8g               | 0.038     | 19.962         | 0.450 | 19.512 | 18.663         | 0.250 | 18.413 | 17.181         | 7H               | 0         | 20.000         | 18.966         | 0.265 | 18.701 | 18.310         | 0.475 | 17.835 |
|                  | 2.5    |      |          | 4h               | 0         | 20.000         | 0.212 | 19.788 | 18.376         | 0.106 | 18.270 | 16.730         | 5H               | 0         | 20.000         | 18.556         | 0.180 | 18.376 | 17.649         | 0.355 | 17.294 |
|                  |        |      |          | 6g               | 0.042     | 19.958         | 0.335 | 19.623 | 18.334         | 0.170 | 18.164 | 16.624         | 6H               | 0         | 20.000         | 18.600         | 0.224 | 18.376 | 17.744         | 0.450 | 17.294 |
|                  |        |      |          | 8g               | 0.042     | 19.958         | 0.530 | 19.428 | 18.334         | 0.265 | 18.069 | 16.529         | 7H               | 0         | 20.000         | 18.656         | 0.280 | 18.376 | 17.854         | 0.560 | 17.294 |



BSI 2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 1      | 2    | 3        | 4                | 5         | 6              | 7     | 8      | 9              | 10    | 11     | 12             | 13               | 14        | 15             | 16             | 17    | 18     | 19             | 20    | 21     | 22   |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |      |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |      |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           | max.  | tol.   | min. |
| 22               |        |      | 1        | 4h               | 0         | 22.000         | 0.112 | 21.888 | 21.350         | 0.075 | 21.275 | 20.659         | 5H               | 0         | 22.000         | 21.475         | 0.125 | 21.350 | 21.107         | 0.190 | 20.917 |      |
|                  |        |      |          | 6g               | 0.026     | 21.974         | 0.180 | 21.794 | 21.324         | 0.118 | 21.206 | 20.590         | 6H               | 0         | 22.000         | 21.510         | 0.160 | 21.350 | 21.153         | 0.236 | 20.917 |      |
|                  |        |      |          | 8g               | 0.026     | 21.974         | 0.280 | 21.694 | 21.324         | 0.190 | 21.134 | 20.518         | 7H               | 0         | 22.000         | 21.550         | 0.200 | 21.350 | 21.217         | 0.300 | 20.917 |      |
|                  |        | 1.5  |          | 4h               | 0         | 22.000         | 0.150 | 21.850 | 21.026         | 0.090 | 20.936 | 20.012         | 5H               | 0         | 22.000         | 21.176         | 0.150 | 21.026 | 20.612         | 0.236 | 20.376 |      |
|                  |        |      |          | 6g               | 0.032     | 21.968         | 0.236 | 21.732 | 20.994         | 0.140 | 20.854 | 19.930         | 6H               | 0         | 22.000         | 21.216         | 0.190 | 21.026 | 20.676         | 0.300 | 20.376 |      |
|                  |        |      |          | 8g               | 0.032     | 21.968         | 0.375 | 21.593 | 20.994         | 0.224 | 20.770 | 19.846         | 7H               | 0         | 22.000         | 21.262         | 0.236 | 21.026 | 20.751         | 0.375 | 20.376 |      |
|                  |        |      | 2        | 4h               | 0         | 22.000         | 0.180 | 21.820 | 20.701         | 0.100 | 20.601 | 19.369         | 5H               | 0         | 22.000         | 20.871         | 0.170 | 20.701 | 20.135         | 0.300 | 19.835 |      |
|                  |        |      |          | 6g               | 0.038     | 21.962         | 0.280 | 21.682 | 20.663         | 0.160 | 20.503 | 19.271         | 6H               | 0         | 22.000         | 20.913         | 0.212 | 20.701 | 20.210         | 0.375 | 19.835 |      |
|                  |        |      |          | 8g               | 0.038     | 21.962         | 0.450 | 21.512 | 20.663         | 0.250 | 20.413 | 19.181         | 7H               | 0         | 22.000         | 20.966         | 0.265 | 20.701 | 20.310         | 0.475 | 19.835 |      |
|                  | 2.5    |      |          | 4h               | 0         | 22.000         | 0.212 | 21.788 | 20.376         | 0.106 | 20.270 | 18.730         | 5H               | 0         | 22.000         | 20.556         | 0.180 | 20.376 | 19.649         | 0.335 | 19.294 |      |
|                  |        |      |          | 6g               | 0.042     | 21.958         | 0.335 | 21.623 | 20.334         | 0.170 | 20.164 | 18.624         | 6H               | 0         | 22.000         | 20.600         | 0.224 | 20.376 | 19.744         | 0.450 | 19.294 |      |
|                  |        |      |          | 8g               | 0.042     | 21.958         | 0.530 | 21.428 | 20.334         | 0.265 | 20.069 | 18.529         | 7H               | 0         | 22.000         | 20.656         | 0.280 | 20.376 | 19.854         | 0.560 | 19.294 |      |
| 24               |        |      | 1        | 4h               | 0         | 24.000         | 0.112 | 23.888 | 23.350         | 0.080 | 23.270 | 22.654         | 5H               | 0         | 24.000         | 23.482         | 0.132 | 23.350 | 23.107         | 0.190 | 22.917 |      |
|                  |        |      |          | 6g               | 0.026     | 23.974         | 0.180 | 23.794 | 23.324         | 0.125 | 23.199 | 22.583         | 6H               | 0         | 24.000         | 23.520         | 0.170 | 23.350 | 23.153         | 0.236 | 22.917 |      |
|                  |        |      |          | 8g               | 0.026     | 23.974         | 0.280 | 23.694 | 23.324         | 0.200 | 23.124 | 22.508         | 7H               | 0         | 24.000         | 23.562         | 0.212 | 23.350 | 23.217         | 0.300 | 22.917 |      |
|                  |        |      | 1.5      | 4h               | 0         | 24.000         | 0.150 | 23.850 | 23.026         | 0.095 | 22.931 | 22.007         | 5H               | 0         | 24.000         | 23.186         | 0.160 | 23.026 | 22.612         | 0.236 | 22.376 |      |
|                  |        |      |          | 6g               | 0.032     | 23.968         | 0.236 | 23.732 | 22.994         | 0.150 | 22.844 | 21.920         | 6H               | 0         | 24.000         | 23.226         | 0.200 | 23.026 | 22.676         | 0.300 | 22.376 |      |
|                  |        |      |          | 8g               | 0.032     | 23.968         | 0.375 | 23.593 | 22.994         | 0.236 | 22.758 | 21.834         | 7H               | 0         | 24.000         | 23.276         | 0.250 | 23.026 | 22.751         | 0.375 | 22.376 |      |
|                  |        | 2    |          | 4h               | 0         | 24.000         | 0.180 | 23.820 | 22.701         | 0.106 | 22.595 | 21.363         | 5H               | 0         | 24.000         | 22.881         | 0.180 | 22.701 | 22.135         | 0.300 | 21.835 |      |
|                  |        |      |          | 6g               | 0.038     | 23.962         | 0.280 | 23.682 | 22.663         | 0.170 | 22.493 | 21.261         | 6H               | 0         | 24.000         | 22.925         | 0.224 | 22.701 | 22.210         | 0.375 | 21.835 |      |
|                  |        |      |          | 8g               | 0.038     | 23.962         | 0.450 | 23.512 | 22.663         | 0.265 | 22.398 | 21.166         | 7H               | 0         | 24.000         | 22.981         | 0.280 | 22.701 | 22.310         | 0.475 | 21.835 |      |
|                  | 3      |      |          | 4h               | 0         | 24.000         | 0.236 | 23.764 | 22.051         | 0.125 | 21.926 | 20.078         | 5H               | 0         | 24.000         | 22.263         | 0.212 | 22.051 | 21.152         | 0.400 | 20.752 |      |
|                  |        |      |          | 6g               | 0.048     | 23.952         | 0.375 | 23.577 | 22.003         | 0.200 | 21.803 | 19.955         | 6H               | 0         | 24.000         | 22.316         | 0.265 | 22.051 | 21.252         | 0.500 | 20.752 |      |
|                  |        |      |          | 8g               | 0.048     | 23.952         | 0.600 | 23.352 | 22.003         | 0.315 | 21.688 | 19.840         | 7H               | 0         | 24.000         | 22.386         | 0.335 | 22.051 | 21.382         | 0.630 | 20.752 |      |
| 25               |        |      | 1        | 4h               | 0         | 25.000         | 0.112 | 24.888 | 24.350         | 0.080 | 24.270 | 23.654         | 5H               | 0         | 25.000         | 24.482         | 0.132 | 24.350 | 24.107         | 0.190 | 23.917 |      |
|                  |        |      |          | 6g               | 0.026     | 24.974         | 0.180 | 24.794 | 24.324         | 0.125 | 24.199 | 23.583         | 6H               | 0         | 25.000         | 24.520         | 0.170 | 24.350 | 24.153         | 0.236 | 23.917 |      |
|                  |        |      |          | 8g               | 0.026     | 24.974         | 0.280 | 24.694 | 24.324         | 0.200 | 24.124 | 23.508         | 7H               | 0         | 25.000         | 24.562         | 0.212 | 24.350 | 24.217         | 0.300 | 23.917 |      |
|                  |        |      | 1.5      | 4h               | 0         | 25.000         | 0.150 | 24.850 | 24.026         | 0.095 | 23.931 | 23.007         | 5H               | 0         | 25.000         | 24.186         | 0.160 | 24.026 | 23.612         | 0.236 | 23.376 |      |
|                  |        |      |          | 6g               | 0.032     | 24.968         | 0.236 | 24.732 | 23.994         | 0.150 | 23.844 | 22.920         | 6H               | 0         | 25.000         | 24.226         | 0.200 | 24.026 | 23.676         | 0.300 | 23.376 |      |
|                  |        |      |          | 8g               | 0.032     | 24.968         | 0.375 | 24.593 | 23.994         | 0.236 | 23.758 | 22.834         | 7H               | 0         | 25.000         | 24.276         | 0.250 | 24.026 | 23.751         | 0.375 | 23.376 |      |
|                  |        |      | 2        | 4h               | 0         | 25.000         | 0.180 | 24.820 | 23.701         | 0.106 | 23.595 | 22.363         | 5H               | 0         | 25.000         | 23.881         | 0.180 | 23.701 | 23.135         | 0.300 | 22.835 |      |
|                  |        |      |          | 6g               | 0.038     | 24.962         | 0.280 | 24.682 | 23.663         | 0.170 | 23.493 | 22.261         | 6H               | 0         | 25.000         | 23.925         | 0.224 | 23.701 | 23.210         | 0.375 | 22.835 |      |
|                  |        |      |          | 8g               | 0.038     | 24.962         | 0.450 | 24.512 | 23.663         | 0.265 | 23.398 | 22.166         | 7H               | 0         | 25.000         | 23.981         | 0.280 | 23.701 | 23.310         | 0.475 | 22.835 |      |



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6                   | 7                          | 8                          | 9                          | 10                         | 11                         | 12                         | 13                         | 14                         | 15             | 16                         | 17                         | 18                         | 19                         | 20                         | 21                         | 22                         |                            |
|------------------|--------|------|----------|------------------|---------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Nominal diameter | Pitch  |      |          | External threads |                     |                            |                            |                            |                            |                            |                            |                            | Internal threads           |                |                            |                            |                            |                            |                            |                            |                            |                            |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev.           | Major diameter             |                            |                            | Pitch diameter             |                            |                            | Minor diameter             | Tolerance class            | Fund dev.      | Major diameter             | Pitch diameter             |                            |                            | Minor diameter             |                            |                            |                            |
|                  |        |      |          |                  |                     | max.                       | tol.                       | min.                       | max.                       | tol.                       | min.                       |                            |                            |                |                            | min.                       | max.                       | tol.                       | min.                       |                            |                            |                            |
|                  |        |      |          |                  |                     |                            |                            |                            |                            |                            |                            |                            |                            |                |                            |                            |                            |                            |                            |                            |                            |                            |
| 26               |        |      | 1.5      | 4h<br>6g<br>8g   | 0<br>0.032<br>0.032 | 26.000<br>25.968<br>25.968 | 0.150<br>0.236<br>0.375    | 25.850<br>25.732<br>25.593 | 25.026<br>24.994<br>24.994 | 0.095<br>0.150<br>0.236    | 24.931<br>24.844<br>24.758 | 24.007<br>23.920<br>23.834 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 26.000<br>26.000<br>26.000 | 25.186<br>25.226<br>25.276 | 0.160<br>0.200<br>0.250    | 25.026<br>25.026<br>25.026 | 24.612<br>24.676<br>24.751 | 0.236<br>0.300<br>0.375    | 24.376<br>24.376<br>24.376 |                            |
| 27               |        |      | 1        | 4h<br>6g<br>8g   | 0<br>0.026<br>0.026 | 27.000<br>26.974<br>26.974 | 0.112<br>0.180<br>0.280    | 26.888<br>26.794<br>26.694 | 26.350<br>26.324<br>26.324 | 0.080<br>0.125<br>0.200    | 26.270<br>26.199<br>26.124 | 25.654<br>25.583<br>25.508 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 27.000<br>27.000<br>27.000 | 26.482<br>26.520<br>26.562 | 0.132<br>0.170<br>0.212    | 26.350<br>26.350<br>26.350 | 26.107<br>26.153<br>26.217 | 0.190<br>0.236<br>0.300    | 25.917<br>25.917<br>25.917 |                            |
|                  |        |      | 1.5      | 4h<br>6g<br>8g   | 0<br>0.032<br>0.032 | 27.000<br>26.968<br>26.968 | 0.150<br>0.236<br>0.375    | 26.850<br>26.732<br>26.593 | 26.026<br>25.994<br>25.994 | 0.095<br>0.150<br>0.236    | 25.931<br>25.844<br>25.758 | 25.007<br>24.920<br>24.834 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 27.000<br>27.000<br>27.000 | 26.186<br>26.226<br>26.276 | 0.160<br>0.200<br>0.250    | 26.026<br>26.026<br>26.026 | 25.612<br>25.676<br>25.751 | 0.236<br>0.300<br>0.375    | 25.376<br>25.376<br>25.376 |                            |
|                  |        | 2    |          | 4h<br>6g<br>8g   | 0<br>0.038<br>0.038 | 27.000<br>26.962<br>26.962 | 0.180<br>0.280<br>0.450    | 26.820<br>26.682<br>26.512 | 25.701<br>25.663<br>25.663 | 0.106<br>0.170<br>0.265    | 25.595<br>25.493<br>25.398 | 24.363<br>24.261<br>24.166 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 27.000<br>27.000<br>27.000 | 25.881<br>25.925<br>25.981 | 0.180<br>0.224<br>0.280    | 25.701<br>25.701<br>25.701 | 25.135<br>25.210<br>25.310 | 0.300<br>0.375<br>0.475    | 24.835<br>24.835<br>24.835 |                            |
|                  |        | 3    |          | 4h<br>6g<br>8g   | 0<br>0.048<br>0.048 | 27.000<br>26.952<br>26.952 | 0.236<br>0.375<br>0.600    | 26.764<br>26.577<br>26.352 | 25.051<br>25.003<br>25.003 | 0.125<br>0.200<br>0.315    | 24.926<br>24.803<br>24.688 | 23.078<br>22.955<br>22.840 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 27.000<br>27.000<br>27.000 | 25.263<br>25.316<br>25.386 | 0.212<br>0.265<br>0.335    | 25.051<br>25.051<br>25.051 | 24.152<br>24.252<br>24.382 | 0.400<br>0.500<br>0.630    | 23.752<br>23.752<br>23.752 |                            |
|                  | 28     |      |          | 1                | 4h<br>6g<br>8g      | 0<br>0.026<br>0.026        | 28.000<br>27.974<br>27.974 | 0.112<br>0.180<br>0.280    | 27.888<br>27.794<br>27.694 | 27.350<br>27.324<br>27.324 | 0.080<br>0.125<br>0.200    | 27.270<br>27.199<br>27.124 | 26.654<br>26.583<br>26.508 | 5H<br>6H<br>7H | 0<br>0<br>0                | 28.000<br>28.000<br>28.000 | 27.482<br>27.520<br>27.562 | 0.132<br>0.170<br>0.212    | 27.350<br>27.350<br>27.350 | 27.107<br>27.153<br>27.217 | 0.190<br>0.236<br>0.300    | 26.917<br>26.917<br>26.917 |
|                  |        |      |          | 1.5              | 4h<br>6g<br>8g      | 0<br>0.032<br>0.032        | 28.000<br>27.968<br>27.968 | 0.150<br>0.236<br>0.375    | 27.850<br>27.732<br>27.593 | 27.026<br>26.994<br>26.994 | 0.095<br>0.150<br>0.236    | 26.931<br>26.844<br>26.758 | 26.007<br>25.920<br>25.834 | 5H<br>6H<br>7H | 0<br>0<br>0                | 28.000<br>28.000<br>28.000 | 27.186<br>27.226<br>27.276 | 0.160<br>0.200<br>0.250    | 27.026<br>27.026<br>27.026 | 26.612<br>26.676<br>26.751 | 0.236<br>0.300<br>0.375    | 26.376<br>26.376<br>26.376 |
|                  |        |      |          | 2                | 4h<br>6g<br>8g      | 0<br>0.038<br>0.038        | 28.000<br>27.962<br>27.962 | 0.180<br>0.280<br>0.450    | 27.820<br>27.682<br>27.512 | 26.701<br>26.663<br>26.663 | 0.106<br>0.170<br>0.265    | 26.595<br>26.493<br>26.390 | 25.363<br>25.261<br>25.166 | 5H<br>6H<br>7H | 0<br>0<br>0                | 28.000<br>28.000<br>28.000 | 26.881<br>26.925<br>26.981 | 0.180<br>0.224<br>0.280    | 26.701<br>26.701<br>26.701 | 26.135<br>26.210<br>26.310 | 0.300<br>0.375<br>0.475    | 25.835<br>25.835<br>25.835 |



BSI 2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 1      | 2    | 3        | 4                | 5         | 6              | 7     | 8      | 9              | 10    | 11     | 12             | 13               | 14        | 15             | 16             | 17    | 18     | 19             | 20    | 21     | 22   |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |      |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |      |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           | max.  | tol.   | min. |
| 30               |        |      | 1        | 4h               | 0         | 30.000         | 0.112 | 29.888 | 29.350         | 0.080 | 29.270 | 28.654         | 5H               | 0         | 30.000         | 29.482         | 0.132 | 29.350 | 29.107         | 0.190 | 28.917 |      |
|                  |        |      |          | 6g               | 0.026     | 29.974         | 0.180 | 29.794 | 29.324         | 0.125 | 29.199 | 28.583         | 6H               | 0         | 30.000         | 29.520         | 0.170 | 29.350 | 29.153         | 0.236 | 28.917 |      |
|                  |        |      |          | 8g               | 0.026     | 29.974         | 0.280 | 29.694 | 29.324         | 0.200 | 29.124 | 28.508         | 7H               | 0         | 30.000         | 29.562         | 0.212 | 29.350 | 29.217         | 0.300 | 28.917 |      |
|                  |        |      | 1.5      | 4h               | 0         | 30.000         | 0.150 | 29.850 | 29.026         | 0.095 | 28.931 | 28.007         | 5H               | 0         | 30.000         | 29.186         | 0.160 | 29.026 | 28.612         | 0.236 | 28.376 |      |
|                  |        |      |          | 6g               | 0.032     | 29.968         | 0.236 | 29.732 | 28.994         | 0.150 | 28.844 | 27.920         | 6H               | 0         | 30.000         | 29.226         | 0.200 | 29.026 | 28.676         | 0.300 | 28.376 |      |
|                  |        |      |          | 8g               | 0.032     | 29.968         | 0.375 | 29.593 | 28.994         | 0.236 | 28.758 | 27.834         | 7H               | 0         | 30.000         | 29.276         | 0.250 | 29.026 | 28.751         | 0.375 | 28.376 |      |
|                  |        | 2    |          | 4h               | 0         | 30.000         | 0.180 | 29.820 | 28.701         | 0.106 | 28.595 | 27.363         | 5H               | 0         | 30.000         | 28.881         | 0.180 | 28.701 | 28.135         | 0.300 | 27.835 |      |
|                  |        |      |          | 6g               | 0.038     | 29.962         | 0.280 | 29.682 | 28.663         | 0.170 | 28.493 | 27.261         | 6H               | 0         | 30.000         | 28.925         | 0.224 | 28.701 | 28.210         | 0.375 | 27.835 |      |
|                  |        |      |          | 8g               | 0.038     | 29.962         | 0.450 | 29.512 | 28.663         | 0.265 | 28.398 | 27.166         | 7H               | 0         | 30.000         | 28.981         | 0.280 | 28.701 | 28.310         | 0.475 | 27.835 |      |
|                  |        |      | 3        | 4h               | 0         | 30.000         | 0.236 | 29.764 | 28.051         | 0.125 | 27.926 | 26.078         | 5H               | 0         | 30.000         | 28.263         | 0.212 | 28.051 | 27.152         | 0.400 | 26.752 |      |
|                  |        |      |          | 6g               | 0.048     | 29.952         | 0.375 | 29.577 | 28.003         | 0.200 | 27.803 | 25.955         | 6H               | 0         | 30.000         | 28.316         | 0.265 | 28.051 | 27.252         | 0.500 | 26.752 |      |
|                  |        |      |          | 8g               | 0.048     | 29.952         | 0.600 | 29.352 | 28.003         | 0.315 | 27.688 | 25.840         | 7H               | 0         | 30.000         | 28.386         | 0.335 | 28.051 | 27.382         | 0.630 | 26.752 |      |
|                  | 3.5    |      |          | 4h               | 0         | 30.000         | 0.265 | 29.735 | 27.727         | 0.132 | 27.595 | 25.438         | 5H               | 0         | 30.000         | 27.951         | 0.224 | 27.727 | 26.661         | 0.450 | 26.211 |      |
|                  |        |      |          | 6g               | 0.053     | 29.947         | 0.425 | 29.522 | 27.674         | 0.212 | 27.462 | 25.305         | 6H               | 0         | 30.000         | 28.007         | 0.280 | 27.727 | 26.771         | 0.560 | 26.211 |      |
|                  |        |      |          | 8g               | 0.053     | 29.947         | 0.670 | 29.277 | 27.674         | 0.335 | 27.339 | 25.182         | 7H               | 0         | 30.000         | 28.082         | 0.355 | 27.727 | 26.921         | 0.710 | 26.211 |      |
| 32               |        |      | 1.5      | 4h               | 0         | 32.000         | 0.150 | 31.850 | 31.026         | 0.095 | 30.931 | 30.007         | 5H               | 0         | 32.000         | 31.186         | 0.160 | 31.026 | 30.612         | 0.236 | 30.376 |      |
|                  |        |      |          | 6g               | 0.032     | 31.968         | 0.236 | 31.732 | 30.994         | 0.150 | 30.844 | 29.920         | 6H               | 0         | 32.000         | 31.226         | 0.200 | 31.026 | 30.676         | 0.300 | 30.376 |      |
|                  |        |      |          | 8g               | 0.032     | 31.968         | 0.375 | 31.593 | 30.994         | 0.236 | 30.758 | 29.834         | 7H               | 0         | 32.000         | 31.276         | 0.250 | 31.026 | 30.751         | 0.375 | 30.376 |      |
|                  |        |      | 2        | 4h               | 0         | 32.000         | 0.180 | 31.820 | 30.701         | 0.106 | 30.595 | 29.363         | 5H               | 0         | 32.000         | 30.881         | 0.180 | 30.701 | 30.135         | 0.300 | 29.835 |      |
|                  |        |      |          | 6g               | 0.038     | 31.962         | 0.280 | 31.682 | 30.663         | 0.170 | 30.493 | 29.261         | 6H               | 0         | 32.000         | 30.925         | 0.224 | 30.701 | 30.210         | 0.375 | 29.835 |      |
|                  |        |      |          | 8g               | 0.038     | 31.962         | 0.450 | 31.512 | 30.663         | 0.265 | 30.398 | 29.166         | 7H               | 0         | 32.000         | 30.981         | 0.280 | 30.701 | 30.310         | 0.475 | 29.835 |      |
| 33               |        |      | 1.5      | 4h               | 0         | 33.000         | 0.150 | 32.850 | 32.026         | 0.095 | 31.931 | 31.007         | 5H               | 0         | 33.000         | 32.186         | 0.160 | 32.026 | 31.612         | 0.236 | 31.376 |      |
|                  |        |      |          | 6g               | 0.032     | 32.968         | 0.236 | 32.732 | 31.994         | 0.150 | 31.844 | 30.920         | 6H               | 0         | 33.000         | 32.226         | 0.200 | 32.026 | 31.676         | 0.300 | 31.376 |      |
|                  |        |      |          | 8g               | 0.032     | 32.968         | 0.375 | 32.593 | 31.994         | 0.236 | 31.758 | 30.834         | 7H               | 0         | 33.000         | 32.276         | 0.250 | 32.026 | 31.751         | 0.375 | 31.376 |      |
|                  |        | 2    |          | 4h               | 0         | 33.000         | 0.180 | 32.820 | 31.701         | 0.106 | 31.595 | 30.363         | 5H               | 0         | 33.000         | 31.881         | 0.180 | 31.701 | 31.135         | 0.300 | 30.835 |      |
|                  |        |      |          | 6g               | 0.038     | 32.962         | 0.280 | 32.682 | 31.663         | 0.170 | 31.493 | 30.261         | 6H               | 0         | 33.000         | 31.925         | 0.224 | 31.701 | 31.210         | 0.375 | 30.835 |      |
|                  |        |      |          | 8g               | 0.038     | 32.962         | 0.450 | 32.512 | 31.663         | 0.265 | 31.398 | 30.166         | 7H               | 0         | 33.000         | 31.981         | 0.280 | 31.701 | 31.310         | 0.475 | 30.835 |      |
|                  |        |      | 3        | 4h               | 0         | 33.000         | 0.236 | 32.764 | 31.051         | 0.125 | 30.926 | 29.078         | 5H               | 0         | 33.000         | 31.263         | 0.212 | 31.051 | 31.152         | 0.400 | 29.752 |      |
|                  |        |      |          | 6g               | 0.048     | 32.952         | 0.375 | 32.577 | 31.003         | 0.200 | 30.803 | 28.955         | 6H               | 0         | 33.000         | 31.316         | 0.265 | 31.051 | 30.252         | 0.500 | 29.752 |      |
|                  |        |      |          | 8g               | 0.048     | 32.952         | 0.600 | 32.352 | 31.003         | 0.315 | 30.688 | 28.840         | 7H               | 0         | 33.000         | 31.386         | 0.335 | 31.051 | 30.382         | 0.630 | 29.752 |      |
|                  | 3.5    |      |          | 4h               | 0         | 33.000         | 0.265 | 32.735 | 30.727         | 0.132 | 30.595 | 28.438         | 5H               | 0         | 33.000         | 30.951         | 0.224 | 30.727 | 29.661         | 0.450 | 29.211 |      |
|                  |        |      |          | 6g               | 0.053     | 32.947         | 0.425 | 32.522 | 30.674         | 0.212 | 30.462 | 28.305         | 6H               | 0         | 33.000         | 31.007         | 0.280 | 30.727 | 29.771         | 0.560 | 29.211 |      |
|                  |        |      |          | 8g               | 0.053     | 32.947         | 0.670 | 32.277 | 30.674         | 0.335 | 30.339 | 28.182         | 7H               | 0         | 33.000         | 31.082         | 0.355 | 30.727 | 29.921         | 0.710 | 29.211 |      |



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6                   | 7                          | 8                       | 9                          | 10                         | 11                      | 12                         | 13                         | 14               | 15          | 16                         | 17                         | 18                      | 19                         | 20                         | 21                      | 22                         |
|------------------|--------|------|----------|------------------|---------------------|----------------------------|-------------------------|----------------------------|----------------------------|-------------------------|----------------------------|----------------------------|------------------|-------------|----------------------------|----------------------------|-------------------------|----------------------------|----------------------------|-------------------------|----------------------------|
| Nominal diameter | Pitch  |      |          | External threads |                     |                            |                         |                            |                            |                         |                            |                            | Internal threads |             |                            |                            |                         |                            |                            |                         |                            |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev.           | Major diameter             |                         |                            | Pitch diameter             |                         |                            | Minor diameter             | Tolerance class  | Fund dev.   | Major diameter             | Pitch diameter             |                         |                            | Minor diameter             |                         |                            |
|                  |        |      |          |                  |                     | max.                       | tol.                    | min.                       | max.                       | tol.                    | min.                       |                            |                  |             |                            | min.                       | max.                    | tol.                       | min.                       |                         |                            |
|                  |        |      |          |                  |                     |                            |                         |                            |                            |                         |                            |                            |                  |             |                            |                            |                         |                            |                            |                         |                            |
| 35               |        |      | 1.5      | 4h<br>6g<br>8g   | 0<br>0.032<br>0.032 | 35.000<br>34.968<br>34.968 | 0.150<br>0.236<br>0.375 | 34.850<br>34.732<br>34.593 | 34.026<br>33.994<br>33.994 | 0.095<br>0.150<br>0.236 | 33.931<br>33.844<br>33.758 | 33.007<br>32.920<br>32.834 | 5H<br>6H<br>7H   | 0<br>0<br>0 | 35.000<br>35.000<br>35.000 | 34.186<br>34.226<br>34.276 | 0.160<br>0.200<br>0.250 | 34.026<br>34.026<br>34.026 | 33.612<br>33.676<br>33.751 | 0.236<br>0.300<br>0.375 | 33.376<br>33.376<br>33.376 |
| 36               |        |      | 1.5      | 4h<br>6g<br>8g   | 0<br>0.032<br>0.032 | 36.000<br>35.968<br>35.968 | 0.150<br>0.236<br>0.375 | 35.850<br>35.732<br>35.593 | 35.026<br>34.994<br>34.994 | 0.095<br>0.150<br>0.236 | 34.931<br>34.844<br>34.758 | 34.007<br>33.920<br>33.834 | 5H<br>6H<br>7H   | 0<br>0<br>0 | 36.000<br>36.000<br>36.000 | 35.186<br>35.226<br>35.276 | 0.160<br>0.200<br>0.250 | 35.026<br>35.026<br>35.026 | 34.612<br>34.676<br>34.751 | 0.236<br>0.300<br>0.375 | 34.376<br>34.376<br>34.376 |
|                  |        |      | 2        | 4h<br>6g<br>8g   | 0<br>0.038<br>0.038 | 36.000<br>35.962<br>35.962 | 0.180<br>0.280<br>0.450 | 35.820<br>35.682<br>35.512 | 34.701<br>34.663<br>34.663 | 0.106<br>0.170<br>0.265 | 34.595<br>34.493<br>34.398 | 33.363<br>33.261<br>33.166 | 5H<br>6H<br>7H   | 0<br>0<br>0 | 36.000<br>36.000<br>36.000 | 34.881<br>34.925<br>34.981 | 0.180<br>0.224<br>0.280 | 34.701<br>34.701<br>34.701 | 34.135<br>34.210<br>34.310 | 0.300<br>0.375<br>0.475 | 33.835<br>33.835<br>33.835 |
|                  |        |      | 3        | 4h<br>6g<br>8g   | 0<br>0.048<br>0.048 | 36.000<br>35.952<br>35.952 | 0.236<br>0.375<br>0.600 | 35.764<br>35.577<br>35.352 | 34.051<br>34.003<br>34.003 | 0.125<br>0.200<br>0.315 | 33.926<br>33.803<br>33.688 | 32.078<br>31.955<br>31.840 | 5H<br>6H<br>7H   | 0<br>0<br>0 | 36.000<br>36.000<br>36.000 | 34.263<br>34.316<br>34.386 | 0.212<br>0.265<br>0.335 | 34.051<br>34.051<br>34.051 | 33.152<br>33.252<br>33.382 | 0.400<br>0.500<br>0.630 | 32.752<br>32.752<br>32.752 |
|                  | 4      |      |          | 4h<br>6g<br>8g   | 0<br>0.060<br>0.060 | 36.000<br>35.940<br>35.940 | 0.300<br>0.475<br>0.750 | 35.700<br>35.465<br>35.190 | 33.402<br>33.342<br>33.342 | 0.140<br>0.224<br>0.355 | 33.262<br>33.118<br>32.987 | 30.798<br>30.654<br>30.523 | 5H<br>6H<br>7H   | 0<br>0<br>0 | 36.000<br>36.000<br>36.000 | 33.638<br>33.702<br>33.777 | 0.236<br>0.300<br>0.375 | 33.402<br>33.402<br>33.402 | 32.145<br>32.270<br>32.420 | 0.475<br>0.600<br>0.750 | 31.670<br>31.670<br>31.670 |
| 38               |        |      | 1.5      | 4h<br>6g<br>8g   | 0<br>0.032<br>0.032 | 38.000<br>37.968<br>37.968 | 0.150<br>0.236<br>0.376 | 37.850<br>37.732<br>37.593 | 37.026<br>36.994<br>36.994 | 0.095<br>0.150<br>0.236 | 36.931<br>36.844<br>36.758 | 36.007<br>35.920<br>35.834 | 5H<br>6H<br>7H   | 0<br>0<br>0 | 38.000<br>38.000<br>38.000 | 37.186<br>37.226<br>37.276 | 0.160<br>0.200<br>0.250 | 37.026<br>37.026<br>37.026 | 33.612<br>36.676<br>36.751 | 0.236<br>0.300<br>0.375 | 36.376<br>36.376<br>36.376 |
| 39               |        |      | 1.5      | 4h<br>6g<br>8g   | 0<br>0.032<br>0.032 | 39.000<br>38.968<br>38.968 | 0.150<br>0.263<br>0.375 | 38.850<br>38.732<br>37.593 | 38.026<br>37.994<br>37.994 | 0.095<br>0.150<br>0.236 | 37.931<br>37.844<br>37.758 | 37.007<br>36.920<br>36.834 | 5H<br>6H<br>7H   | 0<br>0<br>0 | 39.000<br>39.000<br>39.000 | 38.186<br>38.226<br>38.276 | 0.160<br>0.200<br>0.250 | 38.026<br>38.026<br>38.026 | 37.612<br>37.676<br>37.751 | 0.236<br>0.300<br>0.375 | 37.376<br>37.376<br>37.376 |
|                  |        |      | 2        | 4h<br>6g<br>8g   | 0<br>0.038<br>0.038 | 39.000<br>38.962<br>38.962 | 0.180<br>0.280<br>0.450 | 38.820<br>38.682<br>38.512 | 37.701<br>37.663<br>37.663 | 0.106<br>0.170<br>0.265 | 37.595<br>37.493<br>37.398 | 36.363<br>36.261<br>36.166 | 5H<br>6H<br>7H   | 0<br>0<br>0 | 39.000<br>39.000<br>39.000 | 37.881<br>37.925<br>37.981 | 0.180<br>0.224<br>0.280 | 37.701<br>37.701<br>37.701 | 37.135<br>37.210<br>37.310 | 0.300<br>0.375<br>0.475 | 36.835<br>36.835<br>36.835 |
|                  |        |      | 3        | 4h<br>6g<br>8g   | 0<br>0.048<br>0.048 | 39.000<br>38.952<br>38.952 | 0.236<br>0.375<br>0.600 | 38.764<br>38.577<br>38.352 | 37.051<br>37.003<br>37.003 | 0.125<br>0.200<br>0.315 | 36.926<br>36.803<br>36.688 | 35.078<br>34.955<br>34.840 | 5H<br>6H<br>7H   | 0<br>0<br>0 | 39.000<br>39.000<br>39.000 | 37.263<br>37.316<br>37.386 | 0.212<br>0.265<br>0.335 | 37.051<br>37.051<br>37.051 | 36.152<br>36.252<br>36.382 | 0.400<br>0.500<br>0.630 | 35.752<br>35.752<br>35.752 |
|                  | 4      |      |          | 4h<br>6g<br>8g   | 0<br>0.060<br>0.060 | 39.000<br>38.940<br>38.940 | 0.300<br>0.475<br>0.750 | 38.700<br>38.465<br>38.190 | 36.402<br>36.342<br>36.342 | 0.140<br>0.224<br>0.355 | 36.262<br>36.118<br>35.987 | 33.798<br>33.654<br>33.523 | 5H<br>6H<br>7H   | 0<br>0<br>0 | 39.000<br>39.000<br>39.000 | 36.638<br>36.702<br>36.777 | 0.236<br>0.300<br>0.375 | 36.402<br>36.402<br>36.402 | 35.145<br>35.270<br>35.420 | 0.475<br>0.600<br>0.750 | 34.670<br>34.670<br>34.670 |



BSI 2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9      | 10             | 11    | 12     | 13             | 14               | 15        | 16             | 17             | 18    | 19     | 20             | 21    | 22     |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           | max.  | tol.   |
| 40               |        |      | 1.5      | 4h               | 0         | 40.000         | 0.150 | 39.850 | 39.026         | 0.095 | 38.931 | 38.007         | 5H               | 0         | 40.000         | 39.186         | 0.160 | 39.026 | 38.612         | 0.236 | 38.376 |
|                  |        |      |          | 6g               | 0.032     | 39.968         | 0.236 | 39.732 | 38.994         | 0.150 | 38.844 | 37.920         | 6H               | 0         | 40.000         | 39.226         | 0.200 | 39.026 | 38.676         | 0.300 | 38.376 |
|                  |        |      |          | 8g               | 0.032     | 39.968         | 0.375 | 39.593 | 38.994         | 0.236 | 38.758 | 37.834         | 7H               | 0         | 40.000         | 39.276         | 0.250 | 39.026 | 38.751         | 0.375 | 38.376 |
|                  |        |      | 2        | 4h               | 0         | 40.000         | 0.180 | 39.820 | 38.701         | 0.106 | 38.595 | 37.363         | 5H               | 0         | 40.000         | 38.881         | 0.180 | 38.701 | 38.135         | 0.300 | 37.835 |
|                  |        |      |          | 6g               | 0.038     | 39.962         | 0.280 | 39.682 | 38.663         | 0.170 | 38.493 | 37.261         | 6H               | 0         | 40.000         | 38.925         | 0.224 | 38.701 | 38.210         | 0.375 | 37.835 |
|                  |        |      |          | 8g               | 0.038     | 39.962         | 0.450 | 39.512 | 38.663         | 0.265 | 38.398 | 37.166         | 7H               | 0         | 40.000         | 38.981         | 0.280 | 38.701 | 38.310         | 0.475 | 37.835 |
|                  |        |      | 3        | 4h               | 0         | 40.000         | 0.236 | 39.764 | 38.051         | 0.125 | 37.926 | 36.078         | 5H               | 0         | 40.000         | 38.263         | 0.212 | 38.051 | 37.152         | 0.400 | 36.752 |
|                  |        |      |          | 6g               | 0.048     | 39.952         | 0.375 | 39.577 | 38.003         | 0.200 | 37.803 | 35.955         | 6H               | 0         | 40.000         | 38.316         | 0.265 | 38.051 | 37.252         | 0.500 | 36.752 |
|                  |        |      |          | 8g               | 0.048     | 39.952         | 0.600 | 39.352 | 38.003         | 0.315 | 37.688 | 35.840         | 7H               | 0         | 40.000         | 38.386         | 0.335 | 38.051 | 37.382         | 0.630 | 36.752 |
| 42               |        |      | 1.5      | 4h               | 0         | 42.000         | 0.150 | 41.850 | 41.026         | 0.095 | 40.931 | 40.007         | 5H               | 0         | 42.000         | 41.186         | 0.160 | 41.026 | 40.612         | 0.236 | 40.376 |
|                  |        |      |          | 6g               | 0.032     | 41.968         | 0.236 | 41.732 | 40.994         | 0.150 | 40.844 | 39.920         | 6H               | 0         | 42.000         | 41.226         | 0.200 | 41.026 | 40.676         | 0.300 | 40.376 |
|                  |        |      |          | 8g               | 0.032     | 41.968         | 0.375 | 41.593 | 40.994         | 0.236 | 40.758 | 39.834         | 7H               | 0         | 42.000         | 41.276         | 0.250 | 41.026 | 40.751         | 0.375 | 40.376 |
|                  |        |      | 2        | 4h               | 0         | 42.000         | 0.180 | 41.820 | 40.701         | 0.106 | 40.595 | 39.363         | 5H               | 0         | 42.000         | 40.881         | 0.180 | 40.701 | 40.135         | 0.300 | 39.835 |
|                  |        |      |          | 6g               | 0.038     | 41.962         | 0.280 | 41.682 | 40.663         | 0.170 | 40.493 | 39.261         | 6H               | 0         | 42.000         | 40.925         | 0.224 | 40.701 | 40.210         | 0.375 | 39.835 |
|                  |        |      |          | 8g               | 0.038     | 41.962         | 0.450 | 41.512 | 40.663         | 0.265 | 40.398 | 39.166         | 7H               | 0         | 42.000         | 40.981         | 0.280 | 40.701 | 40.310         | 0.475 | 39.835 |
|                  |        |      | 3        | 4h               | 0         | 42.000         | 0.236 | 41.764 | 40.051         | 0.125 | 39.926 | 38.078         | 5H               | 0         | 42.000         | 40.263         | 0.212 | 40.051 | 39.152         | 0.400 | 38.752 |
|                  |        |      |          | 6g               | 0.048     | 41.952         | 0.375 | 41.577 | 40.003         | 0.200 | 39.803 | 37.955         | 6H               | 0         | 42.000         | 40.316         | 0.265 | 40.051 | 39.252         | 0.500 | 38.752 |
|                  |        |      |          | 8g               | 0.048     | 41.952         | 0.600 | 41.352 | 40.003         | 0.315 | 39.688 | 37.840         | 7H               | 0         | 42.000         | 40.386         | 0.335 | 40.051 | 39.382         | 0.630 | 38.752 |
|                  |        |      | 4        | 4h               | 0         | 42.000         | 0.300 | 41.700 | 39.402         | 0.140 | 39.262 | 36.798         | 5H               | 0         | 42.000         | 39.638         | 0.236 | 39.402 | 38.145         | 0.475 | 37.670 |
|                  |        |      |          | 6g               | 0.060     | 41.940         | 0.475 | 41.465 | 39.342         | 0.224 | 39.118 | 36.654         | 6H               | 0         | 42.000         | 39.702         | 0.300 | 39.402 | 38.270         | 0.600 | 37.670 |
|                  |        |      |          | 8g               | 0.060     | 41.940         | 0.750 | 41.190 | 39.342         | 0.355 | 38.987 | 36.523         | 7H               | 0         | 42.000         | 39.777         | 0.375 | 39.402 | 38.420         | 0.750 | 37.670 |
|                  | 4.5    |      |          | 4h               | 0         | 42.000         | 0.315 | 41.685 | 39.077         | 0.150 | 38.927 | 36.155         | 5H               | 0         | 42.000         | 39.327         | 0.250 | 39.077 | 37.659         | 0.530 | 37.129 |
|                  |        |      |          | 6g               | 0.063     | 41.937         | 0.500 | 41.437 | 39.014         | 0.236 | 38.778 | 36.006         | 6H               | 0         | 42.000         | 39.392         | 0.315 | 39.077 | 37.799         | 0.670 | 37.129 |
|                  |        |      |          | 8g               | 0.063     | 41.937         | 0.800 | 41.137 | 39.014         | 0.375 | 38.639 | 35.867         | 7H               | 0         | 42.000         | 39.477         | 0.400 | 39.077 | 37.979         | 0.850 | 37.129 |



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9      | 10             | 11    | 12     | 13             | 14               | 15        | 16             | 17             | 18    | 19     | 20             | 21    | 22     |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           | max.  | tol.   |
| 45               |        |      | 1.5      | 4h               | 0         | 45.000         | 0.150 | 44.850 | 44.026         | 0.095 | 43.931 | 43.007         | 5H               | 0         | 45.000         | 44.186         | 0.160 | 44.026 | 43.612         | 0.236 | 43.376 |
|                  |        |      |          | 6g               | 0.032     | 44.968         | 0.236 | 44.732 | 43.994         | 0.150 | 43.844 | 42.920         | 6H               | 0         | 45.000         | 44.226         | 0.200 | 44.026 | 43.676         | 0.300 | 43.376 |
|                  |        |      |          | 8g               | 0.032     | 44.968         | 0.375 | 44.593 | 43.994         | 0.236 | 43.758 | 42.834         | 7H               | 0         | 45.000         | 44.276         | 0.250 | 44.026 | 43.751         | 0.375 | 43.376 |
|                  |        |      | 2.0      | 4h               | 0         | 45.000         | 0.180 | 44.820 | 43.701         | 0.106 | 43.595 | 42.363         | 5H               | 0         | 45.000         | 43.881         | 0.180 | 43.701 | 43.135         | 0.300 | 42.835 |
|                  |        |      |          | 6g               | 0.038     | 44.962         | 0.280 | 44.682 | 43.663         | 0.170 | 43.493 | 42.261         | 6H               | 0         | 45.000         | 43.925         | 0.224 | 43.701 | 43.210         | 0.375 | 42.835 |
|                  |        |      |          | 8g               | 0.038     | 44.962         | 0.450 | 44.512 | 43.663         | 0.265 | 43.398 | 42.166         | 7H               | 0         | 45.000         | 43.981         | 0.280 | 43.701 | 43.310         | 0.475 | 42.835 |
|                  |        |      | 3.0      | 4h               | 0         | 45.000         | 0.236 | 44.764 | 43.051         | 0.125 | 42.926 | 41.078         | 5H               | 0         | 45.000         | 43.263         | 0.212 | 43.051 | 42.152         | 0.400 | 41.752 |
|                  |        |      |          | 6g               | 0.048     | 44.952         | 0.375 | 44.577 | 43.003         | 0.200 | 42.803 | 40.955         | 6H               | 0         | 45.000         | 43.316         | 0.265 | 43.051 | 42.252         | 0.500 | 41.752 |
|                  |        |      |          | 8g               | 0.048     | 44.952         | 0.600 | 44.352 | 43.003         | 0.315 | 42.688 | 40.840         | 7H               | 0         | 45.000         | 43.386         | 0.335 | 43.051 | 42.382         | 0.630 | 41.752 |
|                  |        |      | 4.0      | 4h               | 0         | 45.000         | 0.300 | 44.700 | 42.402         | 0.140 | 42.262 | 39.798         | 5H               | 0         | 45.000         | 42.638         | 0.236 | 42.402 | 41.145         | 0.475 | 40.670 |
|                  |        |      |          | 6g               | 0.060     | 44.940         | 0.475 | 44.465 | 42.342         | 0.224 | 42.118 | 39.654         | 6H               | 0         | 45.000         | 42.702         | 0.300 | 42.402 | 41.270         | 0.600 | 40.670 |
|                  |        |      |          | 8g               | 0.060     | 44.940         | 0.750 | 44.190 | 42.342         | 0.355 | 41.987 | 39.523         | 7H               | 0         | 45.000         | 42.777         | 0.375 | 42.402 | 41.420         | 0.750 | 40.670 |
|                  | 4.5    |      |          | 4h               | 0         | 45.000         | 0.315 | 44.685 | 42.077         | 0.150 | 41.927 | 39.155         | 5H               | 0         | 45.000         | 42.327         | 0.250 | 42.077 | 40.659         | 0.530 | 40.129 |
|                  |        |      |          | 6g               | 0.063     | 44.937         | 0.500 | 44.437 | 42.014         | 0.236 | 41.778 | 39.006         | 6H               | 0         | 45.000         | 42.392         | 0.315 | 42.077 | 40.799         | 0.670 | 40.129 |
|                  |        |      |          | 8g               | 0.063     | 44.937         | 0.800 | 44.137 | 42.014         | 0.375 | 41.639 | 38.867         | 7H               | 0         | 45.000         | 42.477         | 0.400 | 42.077 | 40.979         | 0.850 | 40.129 |
| 48               |        |      | 1.5      | 4h               | 0         | 48.000         | 0.150 | 47.850 | 47.026         | 0.100 | 46.926 | 46.002         | 5H               | 0         | 48.000         | 47.196         | 0.170 | 47.026 | 46.612         | 0.236 | 46.376 |
|                  |        |      |          | 6g               | 0.032     | 47.968         | 0.236 | 47.732 | 46.994         | 0.160 | 46.834 | 45.910         | 6H               | 0         | 48.000         | 47.238         | 0.212 | 47.026 | 46.676         | 0.300 | 46.376 |
|                  |        |      |          | 8g               | 0.032     | 47.968         | 0.375 | 47.593 | 46.994         | 0.250 | 46.744 | 45.820         | 7H               | 0         | 48.000         | 47.291         | 0.265 | 47.026 | 46.751         | 0.375 | 46.376 |
|                  |        |      | 2.0      | 4h               | 0         | 48.000         | 0.180 | 47.820 | 46.701         | 0.112 | 46.589 | 45.357         | 5H               | 0         | 48.000         | 46.891         | 0.190 | 46.701 | 46.135         | 0.300 | 45.835 |
|                  |        |      |          | 6g               | 0.038     | 47.962         | 0.280 | 47.682 | 46.663         | 0.180 | 46.483 | 45.251         | 6H               | 0         | 48.000         | 46.937         | 0.236 | 46.701 | 46.210         | 0.375 | 45.835 |
|                  |        |      |          | 8g               | 0.038     | 47.962         | 0.450 | 47.512 | 46.663         | 0.280 | 46.383 | 45.151         | 7H               | 0         | 48.000         | 47.001         | 0.300 | 46.701 | 46.310         | 0.475 | 45.835 |
|                  |        |      | 3.0      | 4h               | 0         | 48.000         | 0.236 | 47.764 | 46.051         | 0.132 | 45.919 | 44.071         | 5H               | 0         | 48.000         | 46.275         | 0.224 | 46.051 | 45.152         | 0.400 | 44.752 |
|                  |        |      |          | 6g               | 0.048     | 47.952         | 0.375 | 47.577 | 46.003         | 0.212 | 45.791 | 43.943         | 6H               | 0         | 48.000         | 46.331         | 0.280 | 46.051 | 45.252         | 0.500 | 44.752 |
|                  |        |      |          | 8g               | 0.048     | 47.952         | 0.600 | 47.352 | 46.003         | 0.335 | 45.668 | 43.820         | 7H               | 0         | 48.000         | 46.406         | 0.355 | 46.051 | 45.382         | 0.630 | 44.752 |
|                  |        |      | 4.0      | 4h               | 0         | 48.000         | 0.300 | 47.700 | 45.402         | 0.150 | 45.252 | 42.788         | 5H               | 0         | 48.000         | 45.652         | 0.250 | 45.402 | 44.145         | 0.475 | 43.670 |
|                  |        |      |          | 6g               | 0.060     | 47.940         | 0.475 | 47.465 | 45.342         | 0.236 | 45.106 | 42.642         | 6H               | 0         | 48.000         | 45.717         | 0.315 | 45.402 | 44.270         | 0.600 | 43.670 |
|                  |        |      |          | 8g               | 0.060     | 47.940         | 0.750 | 47.190 | 45.342         | 0.375 | 44.967 | 42.503         | 7H               | 0         | 48.000         | 45.802         | 0.400 | 45.402 | 44.420         | 0.750 | 43.670 |
|                  | 5.0    |      |          | 4h               | 0         | 48.000         | 0.335 | 47.665 | 44.752         | 0.160 | 44.592 | 41.512         | 5H               | 0         | 48.000         | 45.017         | 0.265 | 44.752 | 43.147         | 0.560 | 42.587 |
|                  |        |      |          | 6g               | 0.071     | 47.929         | 0.530 | 47.399 | 44.681         | 0.250 | 44.431 | 41.351         | 6H               | 0         | 48.000         | 45.087         | 0.335 | 44.752 | 43.297         | 0.710 | 42.587 |
|                  |        |      |          | 8g               | 0.071     | 47.929         | 0.850 | 47.079 | 44.681         | 0.400 | 44.281 | 41.201         | 7H               | 0         | 48.000         | 45.177         | 0.425 | 44.752 | 43.487         | 0.900 | 42.587 |



BSI 2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 1      | 2    | 3        | 4                | 5         | 6              | 7     | 8      | 9              | 10    | 11     | 12             | 13               | 14        | 15             | 16             | 17    | 18     | 19             | 20    | 21     | 22   |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |      |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |      |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           | max.  | tol.   | min. |
| 50               |        |      | 1.5      | 4h               | 0         | 50.000         | 0.150 | 49.850 | 49.026         | 0.100 | 48.926 | 48.002         | 5H               | 0         | 50.000         | 49.196         | 0.170 | 49.026 | 48.612         | 0.236 | 48.376 |      |
|                  |        |      |          | 6g               | 0.032     | 49.968         | 0.236 | 49.732 | 48.994         | 0.160 | 48.834 | 47.910         | 6H               | 0         | 50.000         | 49.238         | 0.212 | 49.026 | 48.676         | 0.300 | 48.376 |      |
|                  |        |      |          | 8g               | 0.032     | 49.968         | 0.375 | 49.593 | 48.994         | 0.250 | 48.744 | 47.820         | 7H               | 0         | 50.000         | 49.291         | 0.265 | 49.026 | 48.751         | 0.375 | 48.376 |      |
|                  |        |      | 2.0      | 4h               | 0         | 50.000         | 0.180 | 49.820 | 48.701         | 0.112 | 48.589 | 47.357         | 5H               | 0         | 50.000         | 48.891         | 0.190 | 48.701 | 48.135         | 0.300 | 47.835 |      |
|                  |        |      |          | 6g               | 0.038     | 49.962         | 0.280 | 49.682 | 48.663         | 0.180 | 48.483 | 47.251         | 6H               | 0         | 50.000         | 48.937         | 0.236 | 48.701 | 48.210         | 0.375 | 47.835 |      |
|                  |        |      |          | 8g               | 0.038     | 49.962         | 0.450 | 49.512 | 48.663         | 0.280 | 48.383 | 47.151         | 7H               | 0         | 50.000         | 49.001         | 0.300 | 48.701 | 48.310         | 0.475 | 47.835 |      |
|                  |        |      | 3.0      | 4h               | 0         | 50.000         | 0.236 | 49.764 | 48.051         | 0.132 | 47.919 | 46.071         | 5H               | 0         | 50.000         | 48.275         | 0.224 | 48.051 | 47.152         | 0.400 | 46.752 |      |
|                  |        |      |          | 6g               | 0.048     | 49.952         | 0.375 | 49.577 | 48.003         | 0.212 | 47.791 | 45.943         | 6H               | 0         | 50.000         | 48.331         | 0.280 | 48.051 | 47.252         | 0.500 | 46.752 |      |
|                  |        |      |          | 8g               | 0.048     | 49.952         | 0.600 | 49.352 | 48.003         | 0.335 | 47.668 | 45.820         | 7H               | 0         | 50.000         | 48.406         | 0.355 | 48.051 | 47.382         | 0.630 | 46.752 |      |
| 52               |        |      | 1.5      | 4h               | 0         | 52.000         | 0.150 | 51.850 | 51.026         | 0.100 | 50.926 | 50.002         | 5H               | 0         | 52.000         | 51.196         | 0.170 | 51.026 | 50.612         | 0.236 | 50.376 |      |
|                  |        |      |          | 6g               | 0.032     | 51.968         | 0.236 | 51.732 | 50.994         | 0.160 | 50.834 | 49.910         | 6H               | 0         | 52.000         | 51.238         | 0.212 | 51.026 | 50.676         | 0.300 | 50.376 |      |
|                  |        |      |          | 8g               | 0.032     | 51.968         | 0.375 | 51.593 | 50.994         | 0.250 | 50.744 | 49.820         | 7H               | 0         | 52.000         | 51.291         | 0.265 | 51.026 | 50.751         | 0.375 | 50.376 |      |
|                  |        |      | 2.0      | 4h               | 0         | 52.000         | 0.180 | 51.820 | 50.701         | 0.112 | 50.589 | 49.357         | 5H               | 0         | 52.000         | 50.891         | 0.190 | 50.701 | 50.135         | 0.300 | 49.835 |      |
|                  |        |      |          | 6g               | 0.038     | 51.962         | 0.280 | 51.682 | 50.663         | 0.180 | 50.483 | 49.251         | 6H               | 0         | 52.000         | 50.937         | 0.236 | 50.701 | 50.210         | 0.375 | 49.835 |      |
|                  |        |      |          | 8g               | 0.038     | 51.962         | 0.450 | 51.512 | 50.663         | 0.280 | 50.383 | 49.151         | 7H               | 0         | 52.000         | 51.001         | 0.300 | 50.701 | 50.310         | 0.475 | 49.835 |      |
|                  |        |      | 3.0      | 4h               | 0         | 52.000         | 0.236 | 51.764 | 50.051         | 0.132 | 49.919 | 48.071         | 5H               | 0         | 52.000         | 50.275         | 0.224 | 50.051 | 49.152         | 0.400 | 48.752 |      |
|                  |        |      |          | 6g               | 0.048     | 51.952         | 0.375 | 51.577 | 50.003         | 0.212 | 49.791 | 47.943         | 6H               | 0         | 52.000         | 50.331         | 0.280 | 50.051 | 49.252         | 0.500 | 48.752 |      |
|                  |        |      |          | 8g               | 0.048     | 51.952         | 0.600 | 51.352 | 50.003         | 0.335 | 49.668 | 47.820         | 7H               | 0         | 52.000         | 50.406         | 0.355 | 50.051 | 49.382         | 0.630 | 48.752 |      |
|                  |        |      | 4.0      | 4h               | 0         | 52.000         | 0.300 | 51.700 | 49.402         | 0.150 | 49.252 | 46.788         | 5H               | 0         | 52.000         | 49.652         | 0.250 | 49.402 | 48.145         | 0.475 | 47.670 |      |
|                  |        |      |          | 6g               | 0.060     | 51.940         | 0.475 | 51.465 | 49.342         | 0.236 | 49.106 | 46.642         | 6H               | 0         | 52.000         | 49.717         | 0.315 | 49.402 | 48.270         | 0.600 | 47.670 |      |
|                  |        |      |          | 8g               | 0.060     | 51.940         | 0.750 | 51.190 | 49.342         | 0.375 | 48.967 | 46.503         | 7H               | 0         | 52.000         | 49.802         | 0.400 | 49.402 | 48.420         | 0.750 | 47.670 |      |
|                  | 5.0    |      |          | 4h               | 0         | 52.000         | 0.335 | 51.665 | 48.752         | 0.160 | 48.592 | 45.512         | 5H               | 0         | 52.000         | 49.017         | 0.265 | 48.752 | 47.147         | 0.560 | 46.587 |      |
|                  |        |      |          | 6g               | 0.071     | 51.929         | 0.530 | 51.399 | 48.681         | 0.250 | 48.431 | 45.351         | 6H               | 0         | 52.000         | 49.087         | 0.335 | 48.752 | 47.297         | 0.710 | 46.587 |      |
|                  |        |      |          | 8g               | 0.071     | 51.929         | 0.850 | 51.079 | 48.681         | 0.400 | 48.281 | 45.201         | 7H               | 0         | 52.000         | 49.177         | 0.425 | 48.752 | 47.687         | 0.900 | 46.587 |      |



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9      | 10             | 11    | 12     | 13             | 14               | 15        | 16             | 17             | 18    | 19     | 20             | 21    | 22     |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           |       |        |
|                  |        |      |          |                  |           |                |       |        |                |       |        |                |                  |           |                |                |       |        |                |       |        |
| 55               |        |      | 1.5      | 4h               | 0         | 55.000         | 0.150 | 54.850 | 54.026         | 0.100 | 53.926 | 53.002         | 5H               | 0         | 55.000         | 54.196         | 0.170 | 54.026 | 53.612         | 0.236 | 53.376 |
|                  |        |      |          | 6g               | 0.032     | 54.968         | 0.236 | 54.732 | 53.994         | 0.160 | 53.834 | 52.910         | 6H               | 0         | 55.000         | 54.238         | 0.212 | 54.026 | 53.676         | 0.300 | 53.376 |
|                  |        |      |          | 8g               | 0.032     | 54.968         | 0.375 | 54.593 | 53.994         | 0.250 | 53.744 | 52.820         | 7H               | 0         | 55.000         | 54.291         | 0.265 | 54.026 | 53.751         | 0.375 | 53.376 |
|                  |        |      | 2.0      | 4h               | 0         | 55.000         | 0.180 | 54.820 | 53.701         | 0.112 | 53.589 | 52.357         | 5H               | 0         | 55.000         | 53.891         | 0.190 | 53.701 | 53.135         | 0.300 | 52.835 |
|                  |        |      |          | 6g               | 0.038     | 54.962         | 0.280 | 54.682 | 53.663         | 0.180 | 53.483 | 52.251         | 6H               | 0         | 55.000         | 53.937         | 0.236 | 53.701 | 53.210         | 0.375 | 52.835 |
|                  |        |      |          | 8g               | 0.038     | 54.962         | 0.450 | 54.512 | 53.663         | 0.280 | 53.383 | 52.151         | 7H               | 0         | 55.000         | 54.001         | 0.300 | 53.701 | 53.310         | 0.475 | 52.835 |
|                  |        |      | 3.0      | 4h               | 0         | 55.000         | 0.236 | 54.764 | 53.051         | 0.132 | 52.919 | 51.071         | 5H               | 0         | 55.000         | 53.275         | 0.224 | 53.051 | 52.152         | 0.400 | 51.752 |
|                  |        |      |          | 6g               | 0.048     | 54.952         | 0.375 | 54.577 | 53.003         | 0.212 | 52.791 | 50.943         | 6H               | 0         | 55.000         | 53.331         | 0.280 | 53.051 | 52.252         | 0.500 | 51.752 |
|                  |        |      |          | 8g               | 0.048     | 54.952         | 0.600 | 54.352 | 53.003         | 0.335 | 52.668 | 50.820         | 7H               | 0         | 55.000         | 53.406         | 0.355 | 53.051 | 52.382         | 0.630 | 51.752 |
|                  |        |      | 4.0      | 4h               | 0         | 55.000         | 0.300 | 54.700 | 52.402         | 0.150 | 52.252 | 49.788         | 5H               | 0         | 55.000         | 52.652         | 0.250 | 52.402 | 51.145         | 0.475 | 50.670 |
|                  |        |      |          | 6g               | 0.060     | 54.940         | 0.475 | 54.465 | 52.342         | 0.236 | 52.106 | 49.642         | 6H               | 0         | 55.000         | 52.717         | 0.315 | 52.402 | 51.270         | 0.600 | 50.670 |
|                  |        |      |          | 8g               | 0.060     | 54.940         | 0.750 | 54.190 | 52.342         | 0.375 | 51.967 | 49.503         | 7H               | 0         | 55.000         | 52.802         | 0.400 | 52.402 | 51.420         | 0.750 | 50.670 |
| 56               |        |      | 1.5      | 4h               | 0         | 56.000         | 0.150 | 55.850 | 55.026         | 0.100 | 54.926 | 54.002         | 5H               | 0         | 56.000         | 55.196         | 0.170 | 55.026 | 54.612         | 0.236 | 54.376 |
|                  |        |      |          | 6g               | 0.032     | 55.968         | 0.236 | 55.732 | 54.994         | 0.160 | 54.834 | 53.910         | 6H               | 0         | 56.000         | 55.238         | 0.212 | 55.026 | 54.676         | 0.300 | 54.376 |
|                  |        |      |          | 8g               | 0.032     | 55.968         | 0.375 | 55.593 | 54.994         | 0.250 | 54.744 | 53.820         | 7H               | 0         | 56.000         | 55.291         | 0.265 | 55.026 | 54.751         | 0.375 | 54.376 |
|                  |        |      | 2.0      | 4h               | 0         | 56.000         | 0.180 | 55.820 | 54.701         | 0.112 | 54.589 | 53.357         | 5H               | 0         | 56.000         | 54.891         | 0.190 | 54.701 | 54.135         | 0.300 | 53.835 |
|                  |        |      |          | 6g               | 0.038     | 55.962         | 0.280 | 55.682 | 54.663         | 0.180 | 54.483 | 53.251         | 6H               | 0         | 56.000         | 54.937         | 0.236 | 54.701 | 54.210         | 0.375 | 53.835 |
|                  |        |      |          | 8g               | 0.038     | 55.962         | 0.450 | 55.512 | 54.663         | 0.280 | 54.383 | 53.151         | 7H               | 0         | 56.000         | 55.001         | 0.300 | 54.701 | 54.310         | 0.475 | 53.835 |
|                  |        |      | 3.0      | 4h               | 0         | 56.000         | 0.236 | 55.764 | 54.051         | 0.132 | 53.919 | 52.071         | 5H               | 0         | 56.000         | 54.275         | 0.224 | 54.051 | 53.152         | 0.400 | 52.752 |
|                  |        |      |          | 6g               | 0.048     | 55.952         | 0.375 | 55.577 | 54.003         | 0.212 | 53.791 | 51.943         | 6H               | 0         | 56.000         | 54.331         | 0.280 | 54.051 | 53.252         | 0.500 | 52.752 |
|                  |        |      |          | 8g               | 0.048     | 55.952         | 0.600 | 55.352 | 54.003         | 0.335 | 53.668 | 51.820         | 7H               | 0         | 56.000         | 54.406         | 0.355 | 54.051 | 53.382         | 0.630 | 52.752 |
|                  |        |      | 4.0      | 4h               | 0         | 56.000         | 0.300 | 55.700 | 53.402         | 0.150 | 53.252 | 50.788         | 5H               | 0         | 56.000         | 53.652         | 0.250 | 53.402 | 52.145         | 0.475 | 51.670 |
|                  |        |      |          | 6g               | 0.060     | 55.940         | 0.475 | 55.465 | 53.342         | 0.236 | 53.106 | 50.642         | 6H               | 0         | 56.000         | 53.717         | 0.315 | 53.402 | 52.270         | 0.600 | 51.670 |
|                  |        |      |          | 8g               | 0.060     | 55.940         | 0.750 | 55.190 | 53.342         | 0.375 | 52.967 | 50.503         | 7H               | 0         | 56.000         | 53.802         | 0.400 | 53.402 | 52.430         | 0.750 | 51.670 |
|                  | 5.5    |      |          | 4h               | 0         | 56.000         | 0.355 | 55.645 | 52.428         | 0.170 | 52.258 | 48.870         | 5H               | 0         | 56.000         | 52.708         | 0.280 | 52.428 | 50.646         | 0.600 | 50.046 |
|                  |        |      |          | 6g               | 0.075     | 55.925         | 0.560 | 55.365 | 52.353         | 0.265 | 52.088 | 48.700         | 6H               | 0         | 56.000         | 52.783         | 0.355 | 52.428 | 50.796         | 0.750 | 50.046 |
|                  |        |      |          | 8g               | 0.075     | 55.925         | 0.900 | 55.025 | 52.353         | 0.425 | 51.928 | 48.540         | 7H               | 0         | 56.000         | 52.878         | 0.450 | 52.428 | 50.996         | 0.950 | 50.046 |



BSI 2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

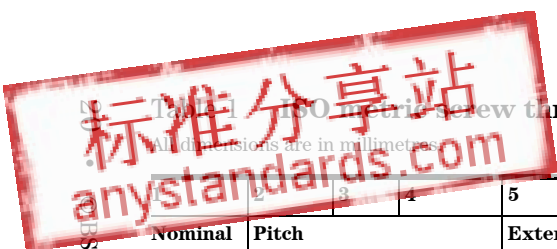
|                  | 1      | 2    | 3        | 4                | 5                   | 6                          | 7                          | 8                          | 9                          | 10                         | 11                         | 12                         | 13                         | 14             | 15                         | 16                         | 17                         | 18                         | 19                         | 20                         | 21                         | 22                         |
|------------------|--------|------|----------|------------------|---------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Nominal diameter | Pitch  |      |          | External threads |                     |                            |                            |                            |                            |                            |                            |                            | Internal threads           |                |                            |                            |                            |                            |                            |                            |                            |                            |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev.           | Major diameter             |                            |                            | Pitch diameter             |                            |                            | Minor diameter             | Tolerance class            | Fund dev.      | Major diameter             | Pitch diameter             |                            |                            | Minor diameter             |                            |                            |                            |
|                  |        |      |          |                  |                     | max.                       | tol.                       | min.                       | max.                       | tol.                       | min.                       |                            |                            |                |                            | min.                       | max.                       | tol.                       | min.                       | max.                       | tol.                       | min.                       |
| 58               |        |      | 1.5      | 4h<br>6g<br>8g   | 0<br>0.032<br>0.032 | 58.000<br>57.968<br>57.968 | 0.150<br>0.236<br>0.375    | 57.850<br>57.732<br>57.593 | 57.026<br>56.994<br>56.994 | 0.100<br>0.160<br>0.250    | 56.926<br>56.834<br>56.744 | 56.002<br>55.910<br>55.820 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 58.000<br>58.000<br>58.000 | 57.196<br>57.238<br>57.291 | 0.170<br>0.212<br>0.265    | 57.026<br>57.026<br>57.026 | 56.612<br>56.676<br>56.751 | 0.236<br>0.300<br>0.375    | 56.376<br>56.376<br>56.376 |                            |
|                  |        |      | 2.0      | 4h<br>6g<br>8g   | 0<br>0.038<br>0.038 | 58.000<br>57.962<br>57.962 | 0.180<br>0.280<br>0.450    | 57.820<br>57.682<br>57.512 | 56.701<br>56.663<br>56.663 | 0.112<br>0.180<br>0.280    | 56.589<br>56.483<br>56.383 | 55.357<br>55.251<br>55.151 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 58.000<br>58.000<br>58.000 | 56.891<br>56.937<br>57.001 | 0.190<br>0.236<br>0.300    | 56.701<br>56.701<br>56.701 | 56.135<br>56.210<br>56.310 | 0.300<br>0.375<br>0.475    | 55.835<br>55.835<br>55.835 |                            |
|                  |        |      | 3.0      | 4h<br>6g<br>8g   | 0<br>0.048<br>0.048 | 58.000<br>57.952<br>57.952 | 0.236<br>0.375<br>0.600    | 57.764<br>57.577<br>57.352 | 56.051<br>56.003<br>56.003 | 0.132<br>0.212<br>0.335    | 55.919<br>55.791<br>55.668 | 54.071<br>53.943<br>53.820 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 58.000<br>58.000<br>58.000 | 56.275<br>56.331<br>56.406 | 0.224<br>0.280<br>0.355    | 56.051<br>56.051<br>56.051 | 55.152<br>55.252<br>55.382 | 0.400<br>0.500<br>0.630    | 54.752<br>54.752<br>54.752 |                            |
|                  |        |      | 4.0      | 4h<br>6g<br>8g   | 0<br>0.060<br>0.060 | 58.000<br>57.940<br>57.940 | 0.300<br>0.475<br>0.750    | 57.700<br>57.465<br>57.190 | 55.402<br>55.342<br>55.342 | 0.150<br>0.236<br>0.375    | 55.252<br>55.106<br>54.967 | 52.788<br>52.642<br>52.503 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 58.000<br>58.000<br>58.000 | 55.652<br>55.717<br>55.802 | 0.250<br>0.315<br>0.400    | 55.402<br>55.402<br>55.402 | 54.145<br>54.270<br>54.420 | 0.475<br>0.600<br>0.750    | 53.670<br>53.670<br>53.670 |                            |
|                  | 60     |      |          | 1.5              | 4h<br>6g<br>8g      | 0<br>0.032<br>0.032        | 60.000<br>59.968<br>59.968 | 0.150<br>0.236<br>0.375    | 59.850<br>59.732<br>59.593 | 59.026<br>58.994<br>58.994 | 0.100<br>0.160<br>0.250    | 58.926<br>58.834<br>58.744 | 58.002<br>57.910<br>57.820 | 5H<br>6H<br>7H | 0<br>0<br>0                | 60.000<br>60.000<br>60.000 | 59.196<br>59.238<br>59.291 | 0.170<br>0.212<br>0.265    | 59.026<br>59.026<br>59.026 | 58.612<br>58.676<br>58.751 | 0.236<br>0.300<br>0.375    | 58.376<br>58.376<br>58.376 |
|                  |        |      |          | 2.0              | 4h<br>6g<br>8g      | 0<br>0.038<br>0.038        | 60.000<br>59.962<br>59.962 | 0.180<br>0.280<br>0.450    | 59.820<br>59.682<br>59.512 | 58.701<br>58.663<br>58.663 | 0.112<br>0.180<br>0.280    | 58.589<br>58.483<br>58.383 | 57.357<br>57.251<br>57.151 | 5H<br>6H<br>7H | 0<br>0<br>0                | 60.000<br>60.000<br>60.000 | 58.891<br>58.937<br>59.001 | 0.190<br>0.236<br>0.300    | 58.701<br>58.701<br>58.701 | 58.135<br>58.210<br>58.310 | 0.300<br>0.375<br>0.475    | 57.835<br>57.835<br>57.835 |
|                  |        |      |          | 3.0              | 4h<br>6g<br>8g      | 0<br>0.048<br>0.048        | 60.000<br>59.952<br>59.952 | 0.236<br>0.375<br>0.600    | 59.764<br>59.577<br>59.352 | 58.051<br>58.003<br>58.003 | 0.132<br>0.212<br>0.335    | 57.919<br>57.791<br>57.668 | 56.071<br>55.943<br>55.820 | 5H<br>6H<br>7H | 0<br>0<br>0                | 60.000<br>60.000<br>60.000 | 58.275<br>58.331<br>58.406 | 0.224<br>0.280<br>0.355    | 58.051<br>58.051<br>58.051 | 57.152<br>57.252<br>57.382 | 0.400<br>0.500<br>0.630    | 56.752<br>56.752<br>56.752 |
|                  |        |      |          | 4.0              | 4h<br>6g<br>8g      | 0<br>0.060<br>0.060        | 60.000<br>59.940<br>59.940 | 0.300<br>0.475<br>0.750    | 59.700<br>59.465<br>59.190 | 57.402<br>57.342<br>57.342 | 0.150<br>0.236<br>0.375    | 57.252<br>57.106<br>56.967 | 54.788<br>54.642<br>54.503 | 5H<br>6H<br>7H | 0<br>0<br>0                | 60.000<br>60.000<br>60.000 | 57.652<br>57.717<br>57.802 | 0.250<br>0.315<br>0.400    | 57.402<br>57.402<br>57.402 | 56.145<br>56.270<br>56.420 | 0.475<br>0.600<br>0.750    | 55.670<br>55.670<br>55.670 |
|                  |        | 5.5  |          |                  | 4h<br>6g<br>8g      | 0<br>0.075<br>0.075        | 60.000<br>59.925<br>59.925 | 0.355<br>0.560<br>0.900    | 59.645<br>59.365<br>59.025 | 56.428<br>56.353<br>56.353 | 0.170<br>0.265<br>0.425    | 56.258<br>56.088<br>55.928 | 52.870<br>52.700<br>52.540 | 5H<br>6H<br>7H | 0<br>0<br>0                | 60.000<br>60.000<br>60.000 | 56.708<br>56.783<br>56.878 | 0.280<br>0.355<br>0.450    | 56.428<br>56.428<br>56.428 | 54.646<br>54.796<br>54.996 | 0.600<br>0.750<br>0.950    | 54.046<br>54.046<br>54.046 |

BS 3643-2:2007



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9      | 10             | 11    | 12     | 13             | 14               | 15        | 16             | 17             | 18    | 19     | 20             | 21    | 22     |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           |       |        |
|                  |        |      |          |                  |           |                |       |        |                |       |        |                |                  |           |                |                |       |        |                |       |        |
| 62               |        |      | 1.5      | 4h               | 0         | 62.000         | 0.150 | 61.850 | 61.026         | 0.100 | 60.926 | 60.002         | 5H               | 0         | 62.000         | 61.196         | 0.170 | 61.026 | 60.612         | 0.236 | 60.376 |
|                  |        |      |          | 6g               | 0.032     | 61.968         | 0.236 | 61.732 | 60.994         | 0.160 | 60.834 | 59.910         | 6H               | 0         | 62.000         | 61.238         | 0.212 | 61.026 | 60.676         | 0.300 | 60.376 |
|                  |        |      |          | 8g               | 0.032     | 61.968         | 0.375 | 61.593 | 60.994         | 0.250 | 60.744 | 59.820         | 7H               | 0         | 62.000         | 61.291         | 0.265 | 61.026 | 60.751         | 0.375 | 60.376 |
|                  |        |      | 2        | 4h               | 0         | 62.000         | 0.180 | 61.820 | 60.701         | 0.112 | 60.589 | 59.357         | 5H               | 0         | 62.000         | 60.891         | 0.190 | 60.701 | 60.135         | 0.300 | 59.835 |
|                  |        |      |          | 6g               | 0.038     | 61.962         | 0.280 | 61.682 | 60.663         | 0.180 | 60.483 | 59.251         | 6H               | 0         | 62.000         | 60.937         | 0.236 | 60.701 | 60.210         | 0.375 | 59.835 |
|                  |        |      |          | 8g               | 0.038     | 61.962         | 0.450 | 61.512 | 60.663         | 0.280 | 60.383 | 59.151         | 7H               | 0         | 62.000         | 61.001         | 0.300 | 60.701 | 60.310         | 0.475 | 59.835 |
|                  |        |      | 3        | 4h               | 0         | 62.000         | 0.236 | 61.764 | 60.051         | 0.132 | 59.919 | 58.071         | 5H               | 0         | 62.000         | 60.275         | 0.224 | 60.051 | 59.152         | 0.400 | 58.752 |
|                  |        |      |          | 6g               | 0.048     | 61.952         | 0.375 | 61.577 | 60.003         | 0.212 | 59.791 | 57.943         | 6H               | 0         | 62.000         | 60.331         | 0.280 | 60.051 | 59.252         | 0.500 | 58.752 |
|                  |        |      |          | 8g               | 0.048     | 61.952         | 0.600 | 61.352 | 60.003         | 0.335 | 59.668 | 57.820         | 7H               | 0         | 62.000         | 60.406         | 0.355 | 60.051 | 59.382         | 0.630 | 58.752 |
|                  |        |      | 4        | 4h               | 0         | 62.000         | 0.300 | 61.700 | 59.402         | 0.150 | 59.252 | 56.788         | 5H               | 0         | 62.000         | 59.652         | 0.250 | 59.402 | 58.145         | 0.475 | 57.670 |
|                  |        |      |          | 6g               | 0.060     | 61.940         | 0.475 | 61.465 | 59.342         | 0.236 | 59.106 | 56.642         | 6H               | 0         | 62.000         | 59.717         | 0.315 | 59.402 | 58.270         | 0.600 | 57.670 |
|                  |        |      |          | 8g               | 0.060     | 61.940         | 0.750 | 61.190 | 59.342         | 0.375 | 58.967 | 56.503         | 7H               | 0         | 62.000         | 59.802         | 0.400 | 59.402 | 58.420         | 0.750 | 57.670 |
| 64               |        |      | 1.5      | 4h               | 0         | 64.000         | 0.150 | 63.850 | 63.026         | 0.100 | 62.926 | 62.002         | 5H               | 0         | 64.000         | 63.196         | 0.170 | 63.026 | 62.612         | 0.236 | 62.376 |
|                  |        |      |          | 6g               | 0.032     | 63.968         | 0.236 | 63.732 | 62.994         | 0.160 | 62.834 | 61.910         | 6H               | 0         | 64.000         | 63.238         | 0.212 | 63.026 | 62.676         | 0.300 | 62.376 |
|                  |        |      |          | 8g               | 0.032     | 63.968         | 0.375 | 63.593 | 62.994         | 0.250 | 62.744 | 61.820         | 7H               | 0         | 64.000         | 63.291         | 0.265 | 63.026 | 62.751         | 0.375 | 62.376 |
|                  |        |      | 2        | 4h               | 0         | 64.000         | 0.180 | 63.820 | 62.701         | 0.112 | 62.589 | 61.357         | 5H               | 0         | 64.000         | 62.891         | 0.190 | 62.701 | 62.135         | 0.300 | 61.835 |
|                  |        |      |          | 6g               | 0.038     | 63.962         | 0.280 | 63.682 | 62.663         | 0.180 | 62.483 | 61.251         | 6H               | 0         | 64.000         | 62.937         | 0.236 | 62.701 | 62.210         | 0.375 | 61.835 |
|                  |        |      |          | 8g               | 0.038     | 63.962         | 0.450 | 63.512 | 62.663         | 0.280 | 62.383 | 61.151         | 7H               | 0         | 64.000         | 63.001         | 0.300 | 62.701 | 62.310         | 0.475 | 61.835 |
|                  |        |      | 3        | 4h               | 0         | 64.000         | 0.236 | 63.764 | 62.051         | 0.132 | 61.919 | 60.071         | 5H               | 0         | 64.000         | 62.275         | 0.224 | 62.051 | 61.152         | 0.400 | 60.752 |
|                  |        |      |          | 6g               | 0.048     | 63.952         | 0.375 | 63.577 | 62.003         | 0.212 | 61.791 | 59.943         | 6H               | 0         | 64.000         | 62.331         | 0.280 | 62.051 | 61.252         | 0.500 | 60.752 |
|                  |        |      |          | 8g               | 0.048     | 63.952         | 0.600 | 63.352 | 62.003         | 0.335 | 61.668 | 59.820         | 7H               | 0         | 64.000         | 62.406         | 0.355 | 62.051 | 61.382         | 0.630 | 60.752 |
|                  |        |      | 4        | 4h               | 0         | 64.000         | 0.300 | 63.700 | 61.402         | 0.150 | 61.252 | 58.788         | 5H               | 0         | 64.000         | 61.652         | 0.250 | 61.402 | 60.145         | 0.475 | 59.670 |
|                  |        |      |          | 6g               | 0.060     | 63.940         | 0.475 | 63.465 | 61.342         | 0.236 | 61.106 | 58.642         | 6H               | 0         | 64.000         | 61.717         | 0.315 | 61.402 | 60.270         | 0.600 | 59.670 |
|                  |        |      |          | 8g               | 0.060     | 63.940         | 0.750 | 63.190 | 61.342         | 0.375 | 60.967 | 58.503         | 7H               | 0         | 64.000         | 61.802         | 0.400 | 61.402 | 60.420         | 0.750 | 59.670 |
|                  | 6      |      |          | 4h               | 0         | 64.000         | 0.375 | 63.625 | 60.103         | 0.180 | 59.923 | 56.227         | 5H               | 0         | 64.000         | 60.403         | 0.300 | 60.103 | 58.135         | 0.630 | 57.505 |
|                  |        |      |          | 6g               | 0.080     | 63.920         | 0.600 | 63.320 | 60.023         | 0.280 | 59.743 | 56.047         | 6H               | 0         | 64.000         | 60.478         | 0.375 | 60.103 | 58.305         | 0.800 | 57.505 |
|                  |        |      |          | 8g               | 0.080     | 63.920         | 0.950 | 62.970 | 60.023         | 0.450 | 59.573 | 55.877         | 7H               | 0         | 64.000         | 60.578         | 0.475 | 60.103 | 58.505         | 1.000 | 57.505 |



BSI 2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6                   | 7                          | 8                          | 9                          | 10                         | 11                         | 12                         | 13                         | 14                         | 15             | 16                         | 17                         | 18                         | 19                         | 20                         | 21                         | 22                         |                            |
|------------------|--------|------|----------|------------------|---------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Nominal diameter | Pitch  |      |          | External threads |                     |                            |                            |                            |                            |                            |                            |                            | Internal threads           |                |                            |                            |                            |                            |                            |                            |                            |                            |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev.           | Major diameter             |                            |                            | Pitch diameter             |                            |                            | Minor diameter             | Tolerance class            | Fund dev.      | Major diameter             | Pitch diameter             |                            |                            | Minor diameter             |                            |                            |                            |
|                  |        |      |          |                  |                     | max.                       | tol.                       | min.                       | max.                       | tol.                       | min.                       |                            |                            |                |                            | min.                       | max.                       | tol.                       | min.                       | max.                       | tol.                       | min.                       |
| 65               |        |      | 1.5      | 4h<br>6g<br>8g   | 0<br>0.032<br>0.032 | 65.000<br>64.968<br>64.968 | 0.150<br>0.236<br>0.375    | 64.850<br>64.732<br>64.593 | 64.026<br>63.994<br>63.994 | 0.100<br>0.160<br>0.250    | 63.926<br>63.834<br>63.744 | 63.002<br>62.910<br>62.820 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 65.000<br>65.000<br>65.000 | 64.196<br>64.238<br>64.291 | 0.170<br>0.212<br>0.265    | 64.026<br>64.026<br>64.026 | 63.612<br>63.676<br>63.751 | 0.236<br>0.300<br>0.375    | 63.376<br>63.376<br>63.376 |                            |
|                  |        |      | 2        | 4h<br>6g<br>8g   | 0<br>0.038<br>0.038 | 65.000<br>64.962<br>64.962 | 0.180<br>0.280<br>0.450    | 64.820<br>64.682<br>64.512 | 63.701<br>63.663<br>63.663 | 0.112<br>0.180<br>0.280    | 63.589<br>63.483<br>63.383 | 62.357<br>62.251<br>62.151 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 65.000<br>65.000<br>65.000 | 63.891<br>63.937<br>64.001 | 0.190<br>0.236<br>0.300    | 63.701<br>63.701<br>63.701 | 63.135<br>63.210<br>63.310 | 0.300<br>0.375<br>0.475    | 62.835<br>62.835<br>62.835 |                            |
|                  |        |      | 3        | 4h<br>6g<br>8g   | 0<br>0.048<br>0.048 | 65.000<br>64.952<br>64.952 | 0.236<br>0.375<br>0.600    | 64.764<br>64.577<br>64.352 | 63.051<br>63.003<br>63.003 | 0.132<br>0.212<br>0.335    | 62.919<br>62.791<br>62.668 | 61.071<br>60.943<br>60.820 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 65.000<br>65.000<br>65.000 | 63.275<br>63.331<br>63.406 | 0.224<br>0.280<br>0.355    | 63.051<br>63.051<br>63.051 | 62.152<br>62.252<br>62.382 | 0.400<br>0.500<br>0.630    | 61.752<br>61.752<br>61.752 |                            |
|                  |        |      | 4        | 4h<br>6g<br>8g   | 0<br>0.060<br>0.060 | 65.000<br>64.940<br>64.940 | 0.300<br>0.475<br>0.750    | 64.700<br>64.465<br>64.190 | 62.402<br>62.342<br>62.342 | 0.150<br>0.236<br>0.375    | 62.252<br>62.106<br>61.967 | 59.788<br>59.642<br>59.503 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 65.000<br>65.000<br>65.000 | 62.652<br>62.717<br>62.802 | 0.250<br>0.315<br>0.400    | 62.402<br>62.402<br>62.402 | 61.145<br>61.270<br>61.420 | 0.475<br>0.600<br>0.750    | 60.670<br>60.670<br>60.670 |                            |
|                  | 68     |      |          | 1.5              | 4h<br>6g<br>8g      | 0<br>0.032<br>0.032        | 68.000<br>67.968<br>67.968 | 0.150<br>0.236<br>0.375    | 67.850<br>67.732<br>67.593 | 67.026<br>66.994<br>66.994 | 0.100<br>0.160<br>0.250    | 66.926<br>66.834<br>66.744 | 66.002<br>65.910<br>65.820 | 5H<br>6H<br>7H | 0<br>0<br>0                | 68.000<br>68.000<br>68.000 | 67.196<br>67.238<br>67.291 | 0.170<br>0.212<br>0.265    | 67.026<br>67.026<br>67.026 | 66.612<br>66.676<br>66.751 | 0.236<br>0.300<br>0.375    | 66.376<br>66.376<br>66.376 |
|                  |        |      |          | 2                | 4h<br>6g<br>8g      | 0<br>0.038<br>0.038        | 68.000<br>67.962<br>67.962 | 0.180<br>0.280<br>0.450    | 67.820<br>67.682<br>67.512 | 66.701<br>66.663<br>66.663 | 0.112<br>0.180<br>0.280    | 66.589<br>66.483<br>66.383 | 65.357<br>65.251<br>65.151 | 5H<br>6H<br>7H | 0<br>0<br>0                | 68.000<br>68.000<br>68.000 | 66.891<br>66.937<br>67.001 | 0.190<br>0.236<br>0.300    | 66.701<br>66.701<br>66.701 | 66.135<br>66.210<br>66.310 | 0.300<br>0.375<br>0.475    | 65.835<br>65.835<br>65.835 |
|                  |        |      |          | 3                | 4h<br>6g<br>8g      | 0<br>0.048<br>0.048        | 68.000<br>67.952<br>67.952 | 0.236<br>0.375<br>0.600    | 67.764<br>67.577<br>67.352 | 66.051<br>66.003<br>66.003 | 0.132<br>0.212<br>0.335    | 65.919<br>65.791<br>65.668 | 64.071<br>63.943<br>63.820 | 5H<br>6H<br>7H | 0<br>0<br>0                | 68.000<br>68.000<br>68.000 | 66.275<br>66.331<br>66.406 | 0.224<br>0.280<br>0.355    | 66.051<br>66.051<br>66.051 | 65.152<br>65.252<br>65.382 | 0.400<br>0.500<br>0.630    | 64.752<br>64.752<br>64.752 |
|                  |        |      |          | 4                | 4h<br>6g<br>8g      | 0<br>0.060<br>0.060        | 68.000<br>67.940<br>67.940 | 0.300<br>0.475<br>0.750    | 67.700<br>67.465<br>67.190 | 65.402<br>65.342<br>65.342 | 0.150<br>0.236<br>0.375    | 65.252<br>65.106<br>64.967 | 62.788<br>62.642<br>62.503 | 5H<br>6H<br>7H | 0<br>0<br>0                | 68.000<br>68.000<br>68.000 | 65.652<br>65.717<br>65.802 | 0.250<br>0.315<br>0.400    | 65.402<br>65.402<br>65.402 | 64.145<br>64.270<br>64.420 | 0.475<br>0.600<br>0.750    | 63.670<br>63.670<br>63.670 |
|                  |        | 6    |          |                  | 4h<br>6g<br>8g      | 0<br>0.080<br>0.080        | 68.000<br>67.920<br>67.920 | 0.375<br>0.600<br>0.950    | 67.625<br>67.320<br>66.970 | 64.103<br>64.023<br>64.023 | 0.180<br>0.280<br>0.450    | 63.923<br>63.743<br>63.573 | 60.227<br>60.047<br>59.877 | 5H<br>6H<br>7H | 0<br>0<br>0                | 68.000<br>68.000<br>68.000 | 64.403<br>64.478<br>64.578 | 0.300<br>0.375<br>0.475    | 64.103<br>64.103<br>64.103 | 62.135<br>62.305<br>62.505 | 0.630<br>0.800<br>1.000    | 61.505<br>61.505<br>61.505 |

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6                   | 7                          | 8                          | 9                          | 10                         | 11                         | 12                         | 13                         | 14                         | 15             | 16                         | 17                         | 18                         | 19                         | 20                         | 21                         | 22                         |                            |
|------------------|--------|------|----------|------------------|---------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Nominal diameter | Pitch  |      |          | External threads |                     |                            |                            |                            |                            |                            |                            |                            | Internal threads           |                |                            |                            |                            |                            |                            |                            |                            |                            |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev.           | Major diameter             |                            |                            | Pitch diameter             |                            |                            | Minor diameter             | Tolerance class            | Fund dev.      | Major diameter             | Pitch diameter             |                            |                            | Minor diameter             |                            |                            |                            |
|                  |        |      |          |                  |                     | max.                       | tol.                       | min.                       | max.                       | tol.                       | min.                       |                            |                            |                |                            | min.                       | max.                       | tol.                       | min.                       |                            |                            |                            |
|                  |        |      |          |                  |                     |                            |                            |                            |                            |                            |                            |                            |                            |                |                            |                            |                            |                            |                            |                            |                            |                            |
| 70               |        |      | 1.5      | 4h<br>6g<br>8g   | 0<br>0.032<br>0.032 | 70.000<br>69.968<br>69.968 | 0.150<br>0.236<br>0.375    | 69.850<br>69.732<br>69.593 | 69.026<br>68.994<br>68.994 | 0.100<br>0.160<br>0.250    | 68.926<br>68.834<br>68.744 | 68.002<br>67.910<br>67.820 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 70.000<br>70.000<br>70.000 | 69.196<br>69.238<br>69.291 | 0.170<br>0.212<br>0.265    | 69.026<br>69.026<br>69.026 | 68.612<br>68.676<br>68.751 | 0.236<br>0.300<br>0.375    | 68.376<br>68.376<br>68.376 |                            |
|                  |        |      | 2        | 4h<br>6g<br>8g   | 0<br>0.038<br>0.038 | 70.000<br>69.962<br>69.962 | 0.180<br>0.280<br>0.450    | 69.820<br>69.682<br>69.512 | 68.701<br>68.663<br>68.663 | 0.112<br>0.180<br>0.280    | 68.589<br>68.483<br>68.383 | 67.357<br>67.251<br>67.151 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 70.000<br>70.000<br>70.000 | 68.891<br>68.937<br>69.001 | 0.190<br>0.236<br>0.300    | 68.701<br>68.701<br>68.701 | 68.135<br>68.210<br>68.310 | 0.300<br>0.375<br>0.475    | 67.835<br>67.835<br>67.835 |                            |
|                  |        |      | 3        | 4h<br>6g<br>8g   | 0<br>0.048<br>0.048 | 70.000<br>69.952<br>69.952 | 0.236<br>0.375<br>0.600    | 69.764<br>69.577<br>69.352 | 68.051<br>68.003<br>68.003 | 0.132<br>0.212<br>0.335    | 67.919<br>67.791<br>67.668 | 66.071<br>65.943<br>65.820 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 70.000<br>70.000<br>70.000 | 68.275<br>68.331<br>68.406 | 0.224<br>0.280<br>0.355    | 68.051<br>68.051<br>68.051 | 67.152<br>67.252<br>67.382 | 0.400<br>0.500<br>0.630    | 66.752<br>66.752<br>66.752 |                            |
|                  |        |      | 4        | 4h<br>6g<br>8g   | 0<br>0.060<br>0.060 | 70.000<br>69.940<br>69.940 | 0.300<br>0.475<br>0.750    | 69.700<br>69.465<br>69.190 | 67.402<br>67.342<br>67.342 | 0.150<br>0.236<br>0.375    | 67.252<br>67.106<br>66.967 | 64.788<br>64.642<br>64.503 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 70.000<br>70.000<br>70.000 | 67.652<br>67.717<br>67.802 | 0.250<br>0.315<br>0.400    | 67.402<br>67.402<br>67.402 | 66.145<br>66.270<br>66.420 | 0.475<br>0.600<br>0.750    | 65.670<br>65.670<br>65.670 |                            |
|                  |        |      | 6        | 4h<br>6g<br>8g   | 0<br>0.080<br>0.080 | 70.000<br>69.920<br>69.920 | 0.375<br>0.600<br>0.950    | 69.625<br>69.320<br>68.970 | 66.103<br>66.023<br>66.023 | 0.180<br>0.280<br>0.450    | 65.923<br>65.743<br>65.573 | 62.227<br>62.047<br>61.877 | 5H<br>6H<br>7H             | 0<br>0<br>0    | 70.000<br>70.000<br>70.000 | 66.403<br>66.478<br>66.578 | 0.300<br>0.375<br>0.475    | 66.103<br>66.103<br>66.103 | 64.135<br>64.305<br>64.505 | 0.630<br>0.800<br>1.000    | 63.505<br>63.505<br>63.505 |                            |
|                  | 72     |      |          | 1.5              | 4h<br>6g<br>8g      | 0<br>0.032<br>0.032        | 72.000<br>71.968<br>71.968 | 0.150<br>0.236<br>0.375    | 71.850<br>71.732<br>71.593 | 71.026<br>70.994<br>70.994 | 0.100<br>0.160<br>0.250    | 70.926<br>70.834<br>70.744 | 70.002<br>69.910<br>69.820 | 5H<br>6H<br>7H | 0<br>0<br>0                | 72.000<br>72.000<br>72.000 | 71.196<br>71.238<br>71.291 | 0.170<br>0.212<br>0.265    | 71.026<br>71.026<br>71.026 | 70.612<br>70.676<br>70.751 | 0.236<br>0.300<br>0.375    | 70.376<br>70.376<br>70.376 |
|                  |        |      |          | 2                | 4h<br>6g<br>8g      | 0<br>0.038<br>0.038        | 72.000<br>71.962<br>71.962 | 0.180<br>0.280<br>0.450    | 71.820<br>71.682<br>71.512 | 70.701<br>70.663<br>70.663 | 0.112<br>0.180<br>0.280    | 70.589<br>70.483<br>70.383 | 69.357<br>69.251<br>69.151 | 5H<br>6H<br>7H | 0<br>0<br>0                | 72.000<br>72.000<br>72.000 | 70.891<br>70.937<br>71.001 | 0.190<br>0.236<br>0.300    | 70.701<br>70.701<br>70.701 | 70.135<br>70.210<br>70.310 | 0.300<br>0.375<br>0.475    | 69.835<br>69.835<br>69.835 |
|                  |        |      |          | 3                | 4h<br>6g<br>8g      | 0<br>0.048<br>0.048        | 72.000<br>71.952<br>71.952 | 0.236<br>0.375<br>0.600    | 71.764<br>71.577<br>71.352 | 70.051<br>70.003<br>70.003 | 0.132<br>0.212<br>0.335    | 69.919<br>69.791<br>69.668 | 68.071<br>67.943<br>67.820 | 5H<br>6H<br>7H | 0<br>0<br>0                | 72.000<br>72.000<br>72.000 | 70.275<br>70.331<br>70.406 | 0.224<br>0.280<br>0.355    | 70.051<br>70.051<br>70.051 | 69.152<br>69.252<br>69.382 | 0.400<br>0.500<br>0.630    | 68.752<br>68.752<br>68.752 |
|                  |        |      |          | 4                | 4h<br>6g<br>8g      | 0<br>0.060<br>0.060        | 72.000<br>71.940<br>71.940 | 0.300<br>0.475<br>0.750    | 71.700<br>71.465<br>71.190 | 69.402<br>69.342<br>69.342 | 0.150<br>0.236<br>0.375    | 69.252<br>69.106<br>69.967 | 66.788<br>66.642<br>66.503 | 5H<br>6H<br>7H | 0<br>0<br>0                | 72.000<br>72.000<br>72.000 | 69.652<br>69.717<br>69.802 | 0.250<br>0.315<br>0.400    | 69.402<br>69.402<br>69.402 | 68.145<br>68.270<br>68.420 | 0.475<br>0.600<br>0.750    | 67.670<br>67.670<br>67.670 |
|                  |        |      |          | 6                | 4h<br>6g<br>8g      | 0<br>0.080<br>0.080        | 72.000<br>71.920<br>71.920 | 0.375<br>0.600<br>0.950    | 71.625<br>71.320<br>70.970 | 68.103<br>68.023<br>68.023 | 0.180<br>0.280<br>0.450    | 67.923<br>67.743<br>67.573 | 64.227<br>64.047<br>63.877 | 5H<br>6H<br>7H | 0<br>0<br>0                | 72.000<br>72.000<br>72.000 | 68.403<br>68.478<br>68.578 | 0.300<br>0.375<br>0.475    | 68.103<br>68.103<br>68.103 | 66.135<br>66.305<br>66.505 | 0.630<br>0.800<br>1.000    | 65.505<br>65.505<br>65.505 |



BSI 2007

ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9      | 10             | 11    | 12     | 13             | 14               | 15        | 16             | 17             | 18    | 19     | 20             | 21    | 22     |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           | max.  | tol.   |
| 75               |        |      | 1.5      | 4h               | 0         | 75.000         | 0.150 | 74.850 | 74.026         | 0.100 | 73.926 | 73.002         | 5H               | 0         | 75.000         | 74.196         | 0.170 | 74.026 | 73.612         | 0.236 | 73.376 |
|                  |        |      |          | 6g               | 0.032     | 74.968         | 0.236 | 74.732 | 73.994         | 0.160 | 73.834 | 72.910         | 6H               | 0         | 75.000         | 74.238         | 0.212 | 74.026 | 73.676         | 0.300 | 73.376 |
|                  |        |      |          | 8g               | 0.032     | 74.968         | 0.375 | 74.593 | 73.994         | 0.250 | 73.744 | 72.820         | 7H               | 0         | 75.000         | 74.291         | 0.265 | 74.026 | 73.751         | 0.375 | 73.376 |
|                  |        |      | 2        | 4h               | 0         | 75.000         | 0.180 | 74.820 | 73.701         | 0.112 | 73.589 | 72.357         | 5H               | 0         | 75.000         | 73.891         | 0.190 | 73.701 | 73.135         | 0.300 | 72.835 |
|                  |        |      |          | 6g               | 0.038     | 74.962         | 0.280 | 74.682 | 73.663         | 0.180 | 73.483 | 72.251         | 6H               | 0         | 75.000         | 73.937         | 0.236 | 73.701 | 73.210         | 0.375 | 72.835 |
|                  |        |      |          | 8g               | 0.038     | 74.962         | 0.450 | 74.512 | 73.663         | 0.280 | 73.383 | 72.151         | 7H               | 0         | 75.000         | 74.001         | 0.300 | 73.701 | 73.310         | 0.475 | 72.835 |
|                  |        |      | 3        | 4h               | 0         | 75.000         | 0.236 | 74.764 | 73.051         | 0.132 | 72.919 | 71.071         | 5H               | 0         | 75.000         | 73.275         | 0.224 | 73.051 | 72.152         | 0.400 | 71.752 |
|                  |        |      |          | 6g               | 0.048     | 74.952         | 0.375 | 74.577 | 73.003         | 0.212 | 72.791 | 70.943         | 6H               | 0         | 75.000         | 73.331         | 0.280 | 73.051 | 72.252         | 0.500 | 71.752 |
|                  |        |      |          | 8g               | 0.048     | 74.952         | 0.600 | 74.352 | 73.003         | 0.335 | 72.668 | 70.820         | 7H               | 0         | 75.000         | 73.406         | 0.355 | 73.051 | 72.382         | 0.630 | 71.752 |
|                  |        |      | 4        | 4h               | 0         | 75.000         | 0.300 | 74.700 | 72.402         | 0.150 | 72.252 | 69.788         | 5H               | 0         | 75.000         | 72.652         | 0.250 | 72.402 | 71.145         | 0.475 | 70.670 |
|                  |        |      |          | 6g               | 0.060     | 74.940         | 0.475 | 74.465 | 72.342         | 0.236 | 72.106 | 69.642         | 6H               | 0         | 75.000         | 72.717         | 0.315 | 72.402 | 71.270         | 0.600 | 70.670 |
|                  |        |      |          | 8g               | 0.060     | 74.940         | 0.750 | 74.190 | 72.342         | 0.375 | 71.967 | 69.503         | 7H               | 0         | 75.000         | 72.802         | 0.400 | 72.402 | 71.420         | 0.750 | 70.670 |
| 76               |        |      | 1.5      | 4h               | 0         | 76.000         | 0.150 | 75.850 | 75.026         | 0.100 | 74.926 | 74.002         | 5H               | 0         | 76.000         | 75.196         | 0.170 | 75.026 | 74.612         | 0.236 | 74.376 |
|                  |        |      |          | 6g               | 0.032     | 75.968         | 0.236 | 75.732 | 74.994         | 0.160 | 74.834 | 73.910         | 6H               | 0         | 76.000         | 75.238         | 0.212 | 75.026 | 74.676         | 0.300 | 74.376 |
|                  |        |      |          | 8g               | 0.032     | 75.968         | 0.375 | 75.593 | 74.994         | 0.250 | 74.744 | 73.820         | 7H               | 0         | 76.000         | 75.291         | 0.265 | 75.026 | 74.751         | 0.375 | 74.376 |
|                  |        |      | 2        | 4h               | 0         | 76.000         | 0.180 | 75.820 | 74.701         | 0.112 | 74.589 | 73.357         | 5H               | 0         | 76.000         | 74.891         | 0.190 | 74.701 | 74.135         | 0.300 | 73.835 |
|                  |        |      |          | 6g               | 0.038     | 75.962         | 0.280 | 75.682 | 74.663         | 0.180 | 74.483 | 73.251         | 6H               | 0         | 76.000         | 74.937         | 0.236 | 74.701 | 74.210         | 0.375 | 73.835 |
|                  |        |      |          | 8g               | 0.038     | 75.962         | 0.450 | 75.512 | 74.663         | 0.280 | 74.383 | 73.151         | 7H               | 0         | 76.000         | 75.001         | 0.300 | 74.701 | 74.310         | 0.475 | 73.835 |
|                  |        |      | 3        | 4h               | 0         | 76.000         | 0.236 | 75.764 | 74.051         | 0.132 | 73.919 | 72.071         | 5H               | 0         | 76.000         | 74.275         | 0.224 | 74.051 | 73.152         | 0.400 | 72.752 |
|                  |        |      |          | 6g               | 0.048     | 75.952         | 0.375 | 75.577 | 74.003         | 0.212 | 73.791 | 71.943         | 6H               | 0         | 76.000         | 74.331         | 0.280 | 74.051 | 73.252         | 0.500 | 72.752 |
|                  |        |      |          | 8g               | 0.048     | 75.952         | 0.600 | 75.352 | 74.003         | 0.335 | 73.668 | 71.820         | 7H               | 0         | 76.000         | 74.406         | 0.355 | 74.051 | 73.382         | 0.630 | 72.752 |
|                  |        |      | 4        | 4h               | 0         | 76.000         | 0.300 | 75.700 | 73.402         | 0.150 | 73.252 | 70.788         | 5H               | 0         | 76.000         | 73.652         | 0.250 | 73.402 | 72.145         | 0.475 | 71.670 |
|                  |        |      |          | 6g               | 0.060     | 75.940         | 0.475 | 75.465 | 73.342         | 0.236 | 73.106 | 70.642         | 6H               | 0         | 76.000         | 73.717         | 0.315 | 73.402 | 72.270         | 0.600 | 71.670 |
|                  |        |      |          | 8g               | 0.060     | 75.940         | 0.750 | 75.190 | 73.342         | 0.375 | 72.967 | 70.503         | 7H               | 0         | 76.000         | 73.802         | 0.400 | 73.402 | 72.420         | 0.750 | 71.670 |
|                  |        |      | 6        | 4h               | 0         | 76.000         | 0.375 | 75.625 | 72.103         | 0.180 | 71.923 | 68.227         | 5H               | 0         | 76.000         | 72.403         | 0.300 | 72.103 | 70.135         | 0.630 | 69.505 |
|                  |        |      |          | 6g               | 0.080     | 75.920         | 0.600 | 75.320 | 72.023         | 0.280 | 71.743 | 68.047         | 6H               | 0         | 76.000         | 72.478         | 0.375 | 72.103 | 70.305         | 0.800 | 69.505 |
|                  |        |      |          | 8g               | 0.080     | 75.920         | 0.950 | 74.970 | 72.023         | 0.450 | 71.573 | 67.877         | 7H               | 0         | 76.000         | 72.578         | 0.475 | 72.103 | 70.505         | 1.000 | 69.505 |
| 78               |        |      | 2        | 4h               | 0         | 78.000         | 0.180 | 77.820 | 76.701         | 0.112 | 76.589 | 75.357         | 5H               | 0         | 78.000         | 76.891         | 0.190 | 76.701 | 76.135         | 0.300 | 75.835 |
|                  |        |      |          | 6g               | 0.038     | 77.962         | 0.280 | 77.682 | 76.663         | 0.180 | 76.483 | 75.251         | 6H               | 0         | 78.000         | 76.937         | 0.236 | 76.701 | 76.210         | 0.375 | 75.835 |
|                  |        |      |          | 8g               | 0.038     | 77.962         | 0.450 | 77.512 | 76.663         | 0.280 | 76.383 | 75.151         | 7H               | 0         | 78.000         | 77.001         | 0.300 | 76.701 | 76.310         | 0.475 | 75.835 |

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9      | 10             | 11    | 12     | 13             | 14               | 15        | 16             | 17             | 18    | 19     | 20             | 21    | 22     |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           |       |        |
|                  |        |      |          |                  |           |                |       |        |                |       |        |                |                  |           |                |                |       |        |                |       |        |
| 80               |        |      | 1.5      | 4h               | 0         | 80.000         | 0.150 | 79.850 | 79.026         | 0.100 | 78.926 | 78.002         | 5H               | 0         | 80.000         | 79.196         | 0.170 | 79.026 | 78.612         | 0.236 | 78.376 |
|                  |        |      |          | 6g               | 0.032     | 79.968         | 0.236 | 79.732 | 78.994         | 0.160 | 78.834 | 77.910         | 6H               | 0         | 80.000         | 79.238         | 0.212 | 79.026 | 78.676         | 0.300 | 78.376 |
|                  |        |      |          | 8g               | 0.032     | 79.968         | 0.375 | 79.593 | 78.994         | 0.250 | 78.774 | 77.820         | 7H               | 0         | 80.000         | 79.291         | 0.265 | 79.026 | 78.751         | 0.375 | 78.376 |
|                  |        |      | 2        | 4h               | 0         | 80.000         | 0.180 | 79.820 | 78.701         | 0.112 | 78.589 | 77.357         | 5H               | 0         | 80.000         | 78.891         | 0.190 | 78.701 | 78.135         | 0.300 | 77.835 |
|                  |        |      |          | 6g               | 0.038     | 79.962         | 0.280 | 79.682 | 78.663         | 0.180 | 78.483 | 77.251         | 6H               | 0         | 80.000         | 78.937         | 0.236 | 78.701 | 78.210         | 0.375 | 77.835 |
|                  |        |      |          | 8g               | 0.038     | 79.962         | 0.450 | 79.512 | 78.663         | 0.280 | 78.383 | 77.151         | 7H               | 0         | 80.000         | 79.001         | 0.300 | 78.701 | 78.310         | 0.475 | 77.835 |
|                  |        |      | 3        | 4h               | 0         | 80.000         | 0.236 | 79.764 | 78.051         | 0.132 | 77.919 | 76.071         | 5H               | 0         | 80.000         | 78.275         | 0.224 | 78.051 | 77.152         | 0.400 | 76.752 |
|                  |        |      |          | 6g               | 0.048     | 79.952         | 0.375 | 79.577 | 78.003         | 0.212 | 77.791 | 75.943         | 6H               | 0         | 80.000         | 78.331         | 0.280 | 78.051 | 77.252         | 0.500 | 76.752 |
|                  |        |      |          | 8g               | 0.048     | 79.952         | 0.600 | 79.352 | 78.003         | 0.335 | 77.668 | 75.820         | 7H               | 0         | 80.000         | 78.406         | 0.355 | 78.051 | 77.382         | 0.630 | 76.752 |
|                  |        |      | 4        | 4h               | 0         | 80.000         | 0.300 | 79.700 | 77.402         | 0.150 | 77.252 | 74.788         | 5H               | 0         | 80.000         | 77.652         | 0.250 | 77.402 | 76.145         | 0.475 | 75.670 |
|                  |        |      |          | 6g               | 0.060     | 79.940         | 0.475 | 79.465 | 77.342         | 0.236 | 77.106 | 74.642         | 6H               | 0         | 80.000         | 77.717         | 0.315 | 77.402 | 76.270         | 0.600 | 75.670 |
|                  |        |      |          | 8g               | 0.060     | 79.940         | 0.750 | 79.190 | 77.342         | 0.375 | 76.967 | 74.503         | 7H               | 0         | 80.000         | 77.802         | 0.400 | 77.402 | 76.420         | 0.750 | 75.670 |
|                  |        |      | 6        | 4h               | 0         | 80.000         | 0.375 | 79.625 | 76.103         | 0.180 | 75.923 | 72.227         | 5H               | 0         | 80.000         | 76.403         | 0.300 | 76.103 | 74.135         | 0.630 | 73.505 |
|                  |        |      |          | 6g               | 0.080     | 79.920         | 0.600 | 79.320 | 76.023         | 0.280 | 75.743 | 72.047         | 6H               | 0         | 80.000         | 76.478         | 0.375 | 76.103 | 74.305         | 0.800 | 73.505 |
|                  |        |      |          | 8g               | 0.080     | 79.920         | 0.950 | 78.970 | 76.023         | 0.450 | 75.573 | 71.877         | 7H               | 0         | 80.000         | 76.578         | 0.475 | 76.103 | 74.505         | 1.000 | 73.505 |
| 82               |        |      | 2        | 4h               | 0         | 82.000         | 0.180 | 81.820 | 80.701         | 0.112 | 80.589 | 79.357         | 5H               | 0         | 82.000         | 80.891         | 0.190 | 80.701 | 80.135         | 0.300 | 79.835 |
|                  |        |      |          | 6g               | 0.038     | 81.962         | 0.280 | 81.682 | 80.663         | 0.180 | 80.483 | 79.251         | 6H               | 0         | 82.000         | 80.937         | 0.236 | 80.701 | 80.210         | 0.375 | 79.835 |
|                  |        |      |          | 8g               | 0.038     | 81.962         | 0.450 | 81.512 | 80.663         | 0.280 | 80.383 | 79.151         | 7H               | 0         | 82.000         | 81.001         | 0.300 | 80.701 | 80.310         | 0.475 | 79.835 |
| 85               |        |      | 2        | 4h               | 0         | 85.000         | 0.180 | 84.820 | 83.701         | 0.112 | 83.589 | 82.357         | 5H               | 0         | 85.000         | 83.891         | 0.190 | 83.701 | 83.135         | 0.300 | 82.835 |
|                  |        |      |          | 6g               | 0.038     | 84.962         | 0.280 | 84.682 | 83.663         | 0.180 | 83.483 | 82.251         | 6H               | 0         | 85.000         | 83.937         | 0.236 | 83.701 | 83.210         | 0.375 | 82.835 |
|                  |        |      |          | 8g               | 0.038     | 84.962         | 0.450 | 84.512 | 83.663         | 0.280 | 83.383 | 82.151         | 7H               | 0         | 85.000         | 84.001         | 0.300 | 83.701 | 83.310         | 0.475 | 82.835 |
|                  |        |      | 3        | 4h               | 0         | 85.000         | 0.236 | 84.764 | 83.051         | 0.132 | 82.919 | 81.071         | 5H               | 0         | 85.000         | 83.275         | 0.224 | 83.051 | 82.152         | 0.400 | 81.752 |
|                  |        |      |          | 6g               | 0.048     | 84.952         | 0.375 | 84.577 | 83.003         | 0.212 | 82.791 | 80.943         | 6H               | 0         | 85.000         | 83.331         | 0.280 | 83.051 | 82.252         | 0.500 | 81.752 |
|                  |        |      |          | 8g               | 0.048     | 84.952         | 0.600 | 84.352 | 83.003         | 0.335 | 82.668 | 80.820         | 7H               | 0         | 85.000         | 83.406         | 0.355 | 83.051 | 82.382         | 0.630 | 81.752 |
|                  |        |      | 4        | 4h               | 0         | 85.000         | 0.300 | 84.700 | 82.402         | 0.150 | 82.252 | 79.788         | 5H               | 0         | 85.000         | 82.652         | 0.250 | 82.402 | 81.145         | 0.475 | 80.670 |
|                  |        |      |          | 6g               | 0.060     | 84.940         | 0.475 | 84.465 | 82.342         | 0.236 | 82.106 | 79.642         | 6H               | 0         | 85.000         | 82.717         | 0.315 | 82.402 | 81.270         | 0.600 | 80.670 |
|                  |        |      |          | 8g               | 0.060     | 84.940         | 0.750 | 84.190 | 82.342         | 0.375 | 81.967 | 79.503         | 7H               | 0         | 85.000         | 82.802         | 0.400 | 82.402 | 81.420         | 0.750 | 80.670 |
|                  |        |      | 6        | 4h               | 0         | 85.000         | 0.375 | 84.625 | 81.103         | 0.180 | 80.923 | 77.227         | 5H               | 0         | 85.000         | 81.403         | 0.300 | 81.103 | 79.135         | 0.630 | 78.505 |
|                  |        |      |          | 6g               | 0.080     | 84.920         | 0.600 | 84.320 | 81.023         | 0.280 | 80.743 | 77.047         | 6H               | 0         | 85.000         | 81.478         | 0.375 | 81.103 | 79.305         | 0.800 | 78.505 |
|                  |        |      |          | 8g               | 0.080     | 84.920         | 0.950 | 84.970 | 81.023         | 0.450 | 81.573 | 76.877         | 7H               | 0         | 85.000         | 81.578         | 0.475 | 81.103 | 79.505         | 1.000 | 78.505 |



BSI 2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 1      | 2    | 3        | 4                | 5         | 6              | 7     | 8      | 9              | 10    | 11     | 12             | 13               | 14        | 15             | 16             | 17    | 18     | 19             | 20    | 21     | 22   |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|--------|----------------|-------|--------|----------------|------------------|-----------|----------------|----------------|-------|--------|----------------|-------|--------|------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |        |                |       |        |                | Internal threads |           |                |                |       |        |                |       |        |      |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |        | Pitch diameter |       |        | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |      |
|                  |        |      |          |                  |           | max.           | tol.  | min.   | max.           | tol.  | min.   |                |                  |           |                | min.           | max.  | tol.   | min.           | max.  | tol.   | min. |
| 90               |        |      | 2        | 4h               | 0         | 90.000         | 0.180 | 89.820 | 88.701         | 0.112 | 88.589 | 87.357         | 5H               | 0         | 90.000         | 88.891         | 0.190 | 88.701 | 88.135         | 0.300 | 87.835 |      |
|                  |        |      |          | 6g               | 0.038     | 89.962         | 0.280 | 89.682 | 88.663         | 0.180 | 88.483 | 87.251         | 6H               | 0         | 90.000         | 88.937         | 0.236 | 88.701 | 88.210         | 0.375 | 87.835 |      |
|                  |        |      |          | 8g               | 0.038     | 89.962         | 0.450 | 89.512 | 88.663         | 0.280 | 88.383 | 87.151         | 7H               | 0         | 90.000         | 89.001         | 0.300 | 88.701 | 88.310         | 0.475 | 87.835 |      |
|                  |        |      | 3        | 4h               | 0         | 90.000         | 0.236 | 89.764 | 88.051         | 0.132 | 87.919 | 86.071         | 5H               | 0         | 90.000         | 88.275         | 0.224 | 88.051 | 87.152         | 0.400 | 86.752 |      |
|                  |        |      |          | 6g               | 0.048     | 89.952         | 0.375 | 89.577 | 88.003         | 0.212 | 87.791 | 85.943         | 6H               | 0         | 90.000         | 88.331         | 0.280 | 88.051 | 87.252         | 0.500 | 86.752 |      |
|                  |        |      |          | 8g               | 0.048     | 89.952         | 0.600 | 89.352 | 88.003         | 0.335 | 87.668 | 85.820         | 7H               | 0         | 90.000         | 88.406         | 0.355 | 88.051 | 87.382         | 0.630 | 86.752 |      |
|                  |        |      | 4        | 4h               | 0         | 90.000         | 0.300 | 89.700 | 87.402         | 0.150 | 87.252 | 84.788         | 5H               | 0         | 90.000         | 87.652         | 0.250 | 87.402 | 86.145         | 0.475 | 85.670 |      |
|                  |        |      |          | 6g               | 0.060     | 89.940         | 0.475 | 89.465 | 87.342         | 0.236 | 87.106 | 84.642         | 6H               | 0         | 90.000         | 87.717         | 0.315 | 87.402 | 86.270         | 0.600 | 85.670 |      |
|                  |        |      |          | 8g               | 0.060     | 89.940         | 0.750 | 89.190 | 87.342         | 0.375 | 86.967 | 84.503         | 7H               | 0         | 90.000         | 87.802         | 0.400 | 87.402 | 86.420         | 0.750 | 85.670 |      |
|                  |        |      | 6        | 4h               | 0         | 90.000         | 0.375 | 89.625 | 86.103         | 0.180 | 85.923 | 82.227         | 5H               | 0         | 90.000         | 86.403         | 0.300 | 86.103 | 84.135         | 0.630 | 83.505 |      |
|                  |        |      |          | 6g               | 0.080     | 89.920         | 0.600 | 89.320 | 86.023         | 0.280 | 85.743 | 82.047         | 6H               | 0         | 90.000         | 86.478         | 0.375 | 86.103 | 84.305         | 0.800 | 83.505 |      |
|                  |        |      |          | 8g               | 0.080     | 89.920         | 0.950 | 88.970 | 86.023         | 0.450 | 85.573 | 81.877         | 7H               | 0         | 90.000         | 86.578         | 0.475 | 86.103 | 84.505         | 1.000 | 83.505 |      |
| 95               |        |      | 2        | 4h               | 0         | 95.000         | 0.180 | 94.820 | 93.701         | 0.118 | 93.583 | 92.351         | 5H               | 0         | 95.000         | 93.901         | 0.200 | 93.701 | 93.135         | 0.300 | 92.835 |      |
|                  |        |      |          | 6g               | 0.038     | 94.962         | 0.280 | 94.682 | 93.663         | 0.190 | 93.473 | 92.241         | 6H               | 0         | 95.000         | 93.951         | 0.250 | 93.701 | 93.210         | 0.375 | 92.835 |      |
|                  |        |      |          | 8g               | 0.038     | 94.962         | 0.450 | 94.512 | 93.663         | 0.300 | 93.363 | 92.131         | 7H               | 0         | 95.000         | 94.016         | 0.315 | 93.701 | 93.310         | 0.475 | 92.835 |      |
|                  |        |      | 3        | 4h               | 0         | 95.000         | 0.236 | 94.764 | 93.051         | 0.140 | 92.911 | 91.063         | 5H               | 0         | 95.000         | 93.287         | 0.236 | 93.051 | 92.152         | 0.400 | 91.752 |      |
|                  |        |      |          | 6g               | 0.048     | 94.952         | 0.375 | 94.577 | 93.003         | 0.224 | 92.779 | 90.931         | 6H               | 0         | 95.000         | 93.351         | 0.300 | 93.051 | 92.252         | 0.500 | 91.752 |      |
|                  |        |      |          | 8g               | 0.048     | 94.952         | 0.600 | 94.352 | 93.003         | 0.355 | 92.648 | 90.800         | 7H               | 0         | 95.000         | 93.426         | 0.375 | 93.051 | 92.382         | 0.630 | 91.752 |      |
|                  |        |      | 4        | 4h               | 0         | 95.000         | 0.300 | 94.700 | 92.402         | 0.160 | 92.242 | 89.778         | 5H               | 0         | 95.000         | 92.667         | 0.265 | 92.402 | 91.145         | 0.475 | 90.670 |      |
|                  |        |      |          | 6g               | 0.060     | 94.940         | 0.475 | 94.465 | 92.342         | 0.250 | 92.092 | 89.628         | 6H               | 0         | 95.000         | 92.737         | 0.335 | 92.402 | 91.270         | 0.600 | 90.670 |      |
|                  |        |      |          | 8g               | 0.060     | 94.940         | 0.750 | 94.190 | 92.342         | 0.400 | 91.942 | 89.478         | 7H               | 0         | 95.000         | 92.827         | 0.425 | 92.402 | 91.420         | 0.750 | 90.670 |      |
|                  |        |      | 6        | 4h               | 0         | 95.000         | 0.375 | 94.625 | 91.103         | 0.190 | 90.913 | 87.217         | 5H               | 0         | 95.000         | 91.418         | 0.315 | 91.103 | 89.135         | 0.630 | 88.505 |      |
|                  |        |      |          | 6g               | 0.080     | 94.920         | 0.600 | 94.320 | 91.023         | 0.300 | 90.723 | 87.027         | 6H               | 0         | 95.000         | 91.503         | 0.400 | 91.103 | 89.305         | 0.800 | 88.505 |      |
|                  |        |      |          | 8g               | 0.080     | 94.920         | 0.950 | 93.970 | 91.023         | 0.475 | 90.548 | 86.852         | 7H               | 0         | 95.000         | 91.603         | 0.500 | 91.103 | 89.505         | 1.000 | 88.505 |      |

BS 3643-2:2007



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9       | 10             | 11    | 12      | 13             | 14               | 15        | 16             | 17             | 18    | 19      | 20             | 21    | 22      |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|-----------|----------------|----------------|-------|---------|----------------|-------|---------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |         |                |       |         |                | Internal threads |           |                |                |       |         |                |       |         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |
|                  |        |      |          |                  |           | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |           |                | max.           | tol.  | min.    | max.           | tol.  | min.    |
| 100              |        |      | 2        | 4h               | 0         | 100.000        | 0.180 | 99.820  | 98.701         | 0.118 | 98.583  | 97.351         | 5H               | 0         | 100.000        | 98.901         | 0.200 | 98.701  | 98.135         | 0.300 | 97.835  |
|                  |        |      |          | 6g               | 0.038     | 99.962         | 0.280 | 99.682  | 98.663         | 0.190 | 98.473  | 97.241         | 6H               | 0         | 100.000        | 98.951         | 0.250 | 98.701  | 98.210         | 0.375 | 97.835  |
|                  |        |      |          | 8g               | 0.038     | 99.962         | 0.450 | 99.512  | 98.663         | 0.300 | 98.363  | 97.131         | 7H               | 0         | 100.000        | 99.016         | 0.315 | 98.701  | 98.310         | 0.475 | 97.835  |
|                  |        |      | 3        | 4h               | 0         | 100.000        | 0.236 | 99.764  | 98.051         | 0.140 | 97.911  | 96.063         | 5H               | 0         | 100.000        | 98.287         | 0.236 | 98.051  | 97.152         | 0.400 | 96.752  |
|                  |        |      |          | 6g               | 0.048     | 99.952         | 0.375 | 99.577  | 98.003         | 0.224 | 97.779  | 95.931         | 6H               | 0         | 100.000        | 98.351         | 0.300 | 98.051  | 97.252         | 0.500 | 96.752  |
|                  |        |      |          | 8g               | 0.048     | 99.952         | 0.600 | 99.352  | 98.003         | 0.355 | 97.648  | 95.800         | 7H               | 0         | 100.000        | 98.426         | 0.375 | 98.051  | 97.382         | 0.630 | 96.752  |
|                  |        |      | 4        | 4h               | 0         | 100.000        | 0.300 | 99.700  | 97.402         | 0.160 | 97.242  | 94.778         | 5H               | 0         | 100.000        | 97.667         | 0.265 | 97.402  | 96.145         | 0.475 | 95.670  |
|                  |        |      |          | 6g               | 0.060     | 99.940         | 0.475 | 99.465  | 97.342         | 0.250 | 97.092  | 94.628         | 6H               | 0         | 100.000        | 97.737         | 0.335 | 97.402  | 96.270         | 0.600 | 95.670  |
|                  |        |      |          | 8g               | 0.060     | 99.940         | 0.750 | 99.190  | 97.342         | 0.400 | 96.942  | 94.478         | 7H               | 0         | 100.000        | 97.827         | 0.425 | 97.402  | 96.420         | 0.750 | 95.670  |
|                  |        |      | 6        | 4h               | 0         | 100.000        | 0.375 | 99.625  | 96.103         | 0.190 | 95.913  | 92.217         | 5H               | 0         | 100.000        | 96.418         | 0.315 | 96.103  | 94.135         | 0.630 | 93.505  |
|                  |        |      |          | 6g               | 0.080     | 99.920         | 0.600 | 99.320  | 96.023         | 0.300 | 95.723  | 92.027         | 6H               | 0         | 100.000        | 96.503         | 0.400 | 96.103  | 94.305         | 0.800 | 93.505  |
|                  |        |      |          | 8g               | 0.080     | 99.920         | 0.950 | 98.970  | 96.023         | 0.475 | 95.548  | 91.852         | 7H               | 0         | 100.000        | 96.603         | 0.500 | 96.103  | 94.505         | 1.000 | 93.505  |
| 105              |        |      | 2        | 4h               | 0         | 105.000        | 0.180 | 104.820 | 103.701        | 0.118 | 103.583 | 102.351        | 5H               | 0         | 105.000        | 103.901        | 0.200 | 103.701 | 103.135        | 0.300 | 102.835 |
|                  |        |      |          | 6g               | 0.038     | 104.962        | 0.280 | 104.682 | 103.663        | 0.190 | 103.473 | 102.241        | 6H               | 0         | 105.000        | 103.951        | 0.250 | 103.701 | 103.210        | 0.375 | 102.835 |
|                  |        |      |          | 8g               | 0.038     | 104.962        | 0.450 | 104.512 | 103.663        | 0.300 | 103.363 | 102.131        | 7H               | 0         | 105.000        | 104.016        | 0.315 | 103.701 | 103.310        | 0.475 | 102.835 |
|                  |        |      | 3        | 4h               | 0         | 105.000        | 0.236 | 104.764 | 103.051        | 0.140 | 102.911 | 101.063        | 5H               | 0         | 105.000        | 103.287        | 0.236 | 103.051 | 102.152        | 0.400 | 101.752 |
|                  |        |      |          | 6g               | 0.048     | 104.952        | 0.375 | 104.577 | 103.003        | 0.224 | 102.779 | 100.931        | 6H               | 0         | 105.000        | 103.351        | 0.300 | 103.051 | 102.252        | 0.500 | 101.752 |
|                  |        |      |          | 8g               | 0.048     | 104.952        | 0.600 | 104.352 | 103.003        | 0.355 | 102.648 | 100.800        | 7H               | 0         | 105.000        | 103.426        | 0.375 | 103.051 | 102.382        | 0.630 | 101.752 |
|                  |        |      | 4        | 4h               | 0         | 105.000        | 0.300 | 104.700 | 102.402        | 0.160 | 102.242 | 99.778         | 5H               | 0         | 105.000        | 102.667        | 0.265 | 102.402 | 101.145        | 0.475 | 100.670 |
|                  |        |      |          | 6g               | 0.060     | 104.940        | 0.475 | 104.465 | 102.342        | 0.250 | 102.092 | 99.628         | 6H               | 0         | 105.000        | 102.737        | 0.335 | 102.402 | 101.270        | 0.600 | 100.670 |
|                  |        |      |          | 8g               | 0.060     | 104.940        | 0.750 | 104.190 | 102.342        | 0.400 | 101.942 | 99.478         | 7H               | 0         | 105.000        | 102.827        | 0.425 | 102.402 | 101.420        | 0.750 | 100.670 |
|                  |        |      | 6        | 4h               | 0         | 105.000        | 0.375 | 104.625 | 101.103        | 0.190 | 100.913 | 97.217         | 5H               | 0         | 105.000        | 101.418        | 0.315 | 101.103 | 99.135         | 0.630 | 98.505  |
|                  |        |      |          | 6g               | 0.080     | 104.920        | 0.600 | 104.320 | 101.023        | 0.300 | 100.723 | 97.027         | 6H               | 0         | 105.000        | 101.503        | 0.400 | 101.103 | 99.305         | 0.800 | 98.505  |
|                  |        |      |          | 8g               | 0.080     | 104.920        | 0.950 | 103.970 | 101.023        | 0.475 | 100.548 | 96.852         | 7H               | 0         | 105.000        | 101.603        | 0.500 | 101.103 | 99.505         | 1.000 | 98.505  |



BSI 2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

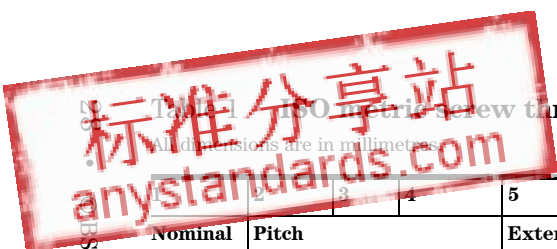
|                  | 1      | 2    | 3        | 4                | 5         | 6              | 7     | 8       | 9              | 10    | 11      | 12             | 13               | 14        | 15             | 16             | 17    | 18      | 19             | 20    | 21      | 22   |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|-----------|----------------|----------------|-------|---------|----------------|-------|---------|------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |         |                |       |         |                | Internal threads |           |                |                |       |         |                |       |         |      |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |      |
|                  |        |      |          |                  |           | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |           |                | min.           | max.  | tol.    | min.           | max.  | tol.    | min. |
| 110              |        |      | 2        | 4h               | 0         | 110.000        | 0.180 | 109.820 | 108.701        | 0.118 | 108.583 | 107.351        | 5H               | 0         | 110.000        | 108.901        | 0.200 | 108.701 | 108.135        | 0.300 | 107.835 |      |
|                  |        |      |          | 6g               | 0.038     | 109.962        | 0.280 | 109.682 | 108.663        | 0.190 | 108.473 | 107.241        | 6H               | 0         | 110.000        | 108.951        | 0.250 | 108.701 | 108.210        | 0.375 | 107.835 |      |
|                  |        |      |          | 8g               | 0.038     | 109.962        | 0.450 | 109.512 | 108.663        | 0.300 | 108.363 | 107.131        | 7H               | 0         | 110.000        | 109.016        | 0.315 | 108.701 | 108.310        | 0.475 | 107.835 |      |
|                  |        |      | 3        | 4h               | 0         | 110.000        | 0.236 | 109.764 | 108.051        | 0.140 | 107.911 | 106.063        | 5H               | 0         | 110.000        | 108.287        | 0.236 | 108.051 | 107.152        | 0.400 | 106.752 |      |
|                  |        |      |          | 6g               | 0.048     | 109.952        | 0.375 | 109.577 | 108.003        | 0.224 | 107.779 | 105.931        | 6H               | 0         | 110.000        | 108.351        | 0.300 | 108.051 | 107.252        | 0.500 | 106.752 |      |
|                  |        |      |          | 8g               | 0.048     | 109.952        | 0.600 | 109.352 | 108.003        | 0.355 | 107.648 | 105.800        | 7H               | 0         | 110.000        | 108.426        | 0.375 | 108.051 | 107.382        | 0.630 | 106.752 |      |
|                  |        |      | 4        | 4h               | 0         | 110.000        | 0.300 | 109.700 | 107.402        | 0.160 | 107.242 | 104.778        | 5H               | 0         | 110.000        | 107.667        | 0.265 | 107.402 | 106.145        | 0.475 | 105.670 |      |
|                  |        |      |          | 6g               | 0.060     | 109.940        | 0.475 | 109.465 | 107.342        | 0.250 | 107.092 | 104.628        | 6H               | 0         | 110.000        | 107.737        | 0.335 | 107.402 | 106.270        | 0.600 | 105.670 |      |
|                  |        |      |          | 8g               | 0.060     | 109.940        | 0.750 | 109.190 | 107.342        | 0.400 | 106.942 | 104.478        | 7H               | 0         | 110.000        | 107.827        | 0.425 | 107.402 | 106.420        | 0.750 | 105.670 |      |
|                  |        |      | 6        | 4h               | 0         | 110.000        | 0.375 | 109.625 | 106.103        | 0.190 | 105.913 | 102.217        | 5H               | 0         | 110.000        | 106.418        | 0.315 | 106.103 | 104.135        | 0.630 | 103.505 |      |
|                  |        |      |          | 6g               | 0.080     | 109.920        | 0.600 | 109.320 | 106.023        | 0.300 | 105.723 | 102.027        | 6H               | 0         | 110.000        | 106.503        | 0.400 | 106.103 | 104.305        | 0.800 | 103.505 |      |
|                  |        |      |          | 8g               | 0.080     | 109.920        | 0.950 | 108.970 | 106.023        | 0.475 | 105.548 | 101.852        | 7H               | 0         | 110.000        | 106.603        | 0.500 | 106.103 | 104.505        | 1.000 | 103.505 |      |
| 115              |        |      | 2        | 4h               | 0         | 115.000        | 0.180 | 114.820 | 113.701        | 0.118 | 113.583 | 112.351        | 5H               | 0         | 115.000        | 113.901        | 0.200 | 113.701 | 113.135        | 0.300 | 112.835 |      |
|                  |        |      |          | 6g               | 0.038     | 114.962        | 0.280 | 114.682 | 113.663        | 0.190 | 113.473 | 112.241        | 6H               | 0         | 115.000        | 113.951        | 0.250 | 113.701 | 113.210        | 0.375 | 112.835 |      |
|                  |        |      |          | 8g               | 0.038     | 114.962        | 0.450 | 114.512 | 113.663        | 0.300 | 113.363 | 112.131        | 7H               | 0         | 115.000        | 114.016        | 0.315 | 113.701 | 113.310        | 0.475 | 112.835 |      |
|                  |        |      | 3        | 4h               | 0         | 115.000        | 0.236 | 114.764 | 113.051        | 0.140 | 112.911 | 111.063        | 5H               | 0         | 115.000        | 113.287        | 0.236 | 113.051 | 112.152        | 0.400 | 111.752 |      |
|                  |        |      |          | 6g               | 0.048     | 114.952        | 0.375 | 114.577 | 113.003        | 0.224 | 112.779 | 110.931        | 6H               | 0         | 115.000        | 113.351        | 0.300 | 113.051 | 112.252        | 0.500 | 111.752 |      |
|                  |        |      |          | 8g               | 0.048     | 114.952        | 0.600 | 114.352 | 113.003        | 0.355 | 112.648 | 110.800        | 7H               | 0         | 115.000        | 113.426        | 0.375 | 113.051 | 112.382        | 0.630 | 111.752 |      |
|                  |        |      | 4        | 4h               | 0         | 115.000        | 0.300 | 114.700 | 112.402        | 0.160 | 112.242 | 109.778        | 5H               | 0         | 115.000        | 112.667        | 0.265 | 112.402 | 111.145        | 0.475 | 110.670 |      |
|                  |        |      |          | 6g               | 0.060     | 114.940        | 0.475 | 114.465 | 112.342        | 0.250 | 112.092 | 109.628        | 6H               | 0         | 115.000        | 112.737        | 0.335 | 112.402 | 111.270        | 0.600 | 110.670 |      |
|                  |        |      |          | 8g               | 0.060     | 114.940        | 0.750 | 114.190 | 112.342        | 0.400 | 111.942 | 109.478        | 7H               | 0         | 115.000        | 112.827        | 0.425 | 112.402 | 111.420        | 0.750 | 110.670 |      |
|                  |        |      | 6        | 4h               | 0         | 115.000        | 0.375 | 114.625 | 111.103        | 0.190 | 110.913 | 107.217        | 5H               | 0         | 115.000        | 111.418        | 0.315 | 111.103 | 109.135        | 0.630 | 108.505 |      |
|                  |        |      |          | 6g               | 0.080     | 114.920        | 0.600 | 114.320 | 111.023        | 0.300 | 110.723 | 107.027        | 6H               | 0         | 115.000        | 111.503        | 0.400 | 111.103 | 109.305        | 0.800 | 108.505 |      |
|                  |        |      |          | 8g               | 0.080     | 114.920        | 0.950 | 113.970 | 111.023        | 0.475 | 110.548 | 106.852        | 7H               | 0         | 115.000        | 111.603        | 0.500 | 111.103 | 109.505        | 1.000 | 108.505 |      |

BS 3643-2:2007



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6          | 7              | 8     | 9       | 10             | 11    | 12      | 13             | 14               | 15         | 16             | 17             | 18    | 19      | 20             | 21    | 22      |
|------------------|--------|------|----------|------------------|------------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|------------|----------------|----------------|-------|---------|----------------|-------|---------|
| Nominal diameter | Pitch  |      |          | External threads |            |                |       |         |                |       |         |                | Internal threads |            |                |                |       |         |                |       |         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund. dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund. dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |
|                  |        |      |          |                  |            | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |            |                | max.           | tol.  | min.    | max.           | tol.  | min.    |
| 120              |        |      | 2        | 4h               | 0          | 120.000        | 0.180 | 119.820 | 118.701        | 0.118 | 118.583 | 117.351        | 5H               | 0          | 120.000        | 118.901        | 0.200 | 118.701 | 118.135        | 0.300 | 117.835 |
|                  |        |      |          | 6g               | 0.038      | 119.962        | 0.280 | 119.682 | 118.663        | 0.190 | 118.473 | 117.241        | 6H               | 0          | 120.000        | 118.951        | 0.250 | 118.701 | 118.210        | 0.375 | 117.835 |
|                  |        |      |          | 8g               | 0.038      | 119.962        | 0.450 | 119.512 | 118.663        | 0.300 | 118.363 | 117.131        | 7H               | 0          | 120.000        | 119.016        | 0.315 | 118.701 | 118.310        | 0.475 | 117.835 |
|                  |        |      | 3        | 4h               | 0          | 120.000        | 0.236 | 119.764 | 118.051        | 0.140 | 117.911 | 116.063        | 5H               | 0          | 120.000        | 118.287        | 0.236 | 118.051 | 117.152        | 0.400 | 116.752 |
|                  |        |      |          | 6g               | 0.048      | 119.952        | 0.375 | 119.577 | 118.003        | 0.224 | 117.779 | 115.931        | 6H               | 0          | 120.000        | 118.351        | 0.300 | 118.051 | 117.252        | 0.500 | 116.752 |
|                  |        |      |          | 8g               | 0.048      | 119.952        | 0.600 | 119.352 | 118.003        | 0.355 | 117.648 | 115.800        | 7H               | 0          | 120.000        | 118.426        | 0.375 | 118.051 | 117.382        | 0.630 | 116.752 |
|                  |        |      | 4        | 4h               | 0          | 120.000        | 0.300 | 119.700 | 117.402        | 0.160 | 117.242 | 114.778        | 5H               | 0          | 120.000        | 117.667        | 0.265 | 117.402 | 116.145        | 0.475 | 115.670 |
|                  |        |      |          | 6g               | 0.060      | 119.940        | 0.475 | 119.465 | 117.342        | 0.250 | 117.092 | 114.628        | 6H               | 0          | 120.000        | 117.737        | 0.335 | 117.402 | 116.270        | 0.600 | 115.670 |
|                  |        |      |          | 8g               | 0.060      | 119.940        | 0.750 | 119.190 | 117.342        | 0.400 | 116.942 | 114.478        | 7H               | 0          | 120.000        | 117.827        | 0.425 | 117.402 | 116.420        | 0.750 | 115.670 |
|                  |        |      | 6        | 4h               | 0          | 120.000        | 0.375 | 119.625 | 116.103        | 0.190 | 115.913 | 112.217        | 5H               | 0          | 120.000        | 116.418        | 0.315 | 116.103 | 114.135        | 0.630 | 113.505 |
|                  |        |      |          | 6g               | 0.080      | 119.920        | 0.600 | 119.320 | 116.023        | 0.300 | 115.723 | 112.027        | 6H               | 0          | 120.000        | 116.503        | 0.400 | 116.103 | 114.305        | 0.800 | 113.505 |
|                  |        |      |          | 8g               | 0.080      | 119.920        | 0.950 | 118.970 | 116.023        | 0.475 | 115.548 | 111.852        | 7H               | 0          | 120.000        | 116.603        | 0.500 | 116.103 | 114.505        | 1.000 | 113.505 |
| 125              |        |      | 2        | 4h               | 0          | 125.000        | 0.180 | 124.820 | 123.701        | 0.118 | 123.583 | 122.351        | 5H               | 0          | 125.000        | 123.901        | 0.200 | 123.701 | 123.135        | 0.300 | 122.835 |
|                  |        |      |          | 6g               | 0.038      | 124.962        | 0.280 | 124.682 | 123.663        | 0.190 | 123.473 | 122.241        | 6H               | 0          | 125.000        | 123.951        | 0.250 | 123.701 | 123.210        | 0.375 | 122.835 |
|                  |        |      |          | 8g               | 0.038      | 124.962        | 0.450 | 124.512 | 123.663        | 0.300 | 123.363 | 122.131        | 7H               | 0          | 125.000        | 124.016        | 0.315 | 123.701 | 123.310        | 0.475 | 122.835 |
|                  |        |      | 3        | 4h               | 0          | 125.000        | 0.236 | 124.764 | 123.051        | 0.140 | 122.911 | 121.063        | 5H               | 0          | 125.000        | 123.287        | 0.236 | 123.051 | 122.152        | 0.400 | 121.752 |
|                  |        |      |          | 6g               | 0.048      | 124.952        | 0.375 | 124.577 | 123.003        | 0.224 | 122.779 | 120.931        | 6H               | 0          | 125.000        | 123.351        | 0.300 | 123.051 | 122.252        | 0.500 | 121.752 |
|                  |        |      |          | 8g               | 0.048      | 124.952        | 0.600 | 124.352 | 123.003        | 0.355 | 122.648 | 120.800        | 7H               | 0          | 125.000        | 123.426        | 0.375 | 123.051 | 122.382        | 0.630 | 121.752 |
|                  |        |      | 4        | 4h               | 0          | 125.000        | 0.300 | 124.700 | 122.402        | 0.160 | 122.242 | 119.778        | 5H               | 0          | 125.000        | 122.667        | 0.265 | 122.402 | 121.145        | 0.475 | 120.670 |
|                  |        |      |          | 6g               | 0.060      | 124.940        | 0.475 | 124.465 | 122.342        | 0.250 | 122.092 | 119.628        | 6H               | 0          | 125.000        | 122.737        | 0.335 | 122.402 | 121.270        | 0.600 | 120.670 |
|                  |        |      |          | 8g               | 0.060      | 124.940        | 0.750 | 124.190 | 122.342        | 0.400 | 121.942 | 119.478        | 7H               | 0          | 125.000        | 122.827        | 0.425 | 122.402 | 121.420        | 0.750 | 120.670 |
|                  |        |      | 6        | 4h               | 0          | 125.000        | 0.375 | 124.625 | 121.103        | 0.190 | 120.913 | 117.217        | 5H               | 0          | 125.000        | 121.418        | 0.315 | 121.103 | 119.135        | 0.630 | 118.505 |
|                  |        |      |          | 6g               | 0.080      | 124.920        | 0.600 | 124.320 | 121.023        | 0.300 | 120.723 | 117.027        | 6H               | 0          | 125.000        | 121.503        | 0.400 | 121.103 | 119.305        | 0.800 | 118.505 |
|                  |        |      |          | 8g               | 0.080      | 124.920        | 0.950 | 123.970 | 121.023        | 0.475 | 120.548 | 116.852        | 7H               | 0          | 125.000        | 121.603        | 0.500 | 121.103 | 119.505        | 1.000 | 118.505 |



BSI 2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9       | 10             | 11    | 12      | 13             | 14               | 15        | 16             | 17             | 18    | 19      | 20             | 21    | 22      |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|-----------|----------------|----------------|-------|---------|----------------|-------|---------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |         |                |       |         |                | Internal threads |           |                |                |       |         |                |       |         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |
|                  |        |      |          |                  |           | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |           |                | min.           | max.  | tol.    | min.           | max.  | tol.    |
| 130              |        |      | 2        | 4h               | 0         | 130.000        | 0.180 | 129.820 | 128.701        | 0.118 | 128.583 | 127.351        | 5H               | 0         | 130.000        | 128.901        | 0.200 | 128.701 | 128.135        | 0.300 | 127.835 |
|                  |        |      |          | 6g               | 0.038     | 129.962        | 0.280 | 129.682 | 128.663        | 0.190 | 128.473 | 127.241        | 6H               | 0         | 130.000        | 128.951        | 0.250 | 128.701 | 128.210        | 0.375 | 127.835 |
|                  |        |      |          | 8g               | 0.038     | 129.962        | 0.450 | 129.512 | 128.663        | 0.300 | 128.363 | 127.131        | 7H               | 0         | 130.000        | 129.016        | 0.315 | 128.701 | 128.310        | 0.475 | 127.835 |
|                  |        |      | 3        | 4h               | 0         | 130.000        | 0.236 | 129.764 | 128.051        | 0.140 | 127.911 | 126.063        | 5H               | 0         | 130.000        | 128.287        | 0.236 | 128.051 | 127.152        | 0.400 | 126.752 |
|                  |        |      |          | 6g               | 0.048     | 129.952        | 0.375 | 129.577 | 128.003        | 0.224 | 127.779 | 125.931        | 6H               | 0         | 130.000        | 128.351        | 0.300 | 128.051 | 127.252        | 0.500 | 126.752 |
|                  |        |      |          | 8g               | 0.048     | 129.952        | 0.600 | 129.352 | 128.003        | 0.355 | 127.648 | 125.800        | 7H               | 0         | 130.000        | 128.426        | 0.375 | 128.051 | 127.382        | 0.630 | 126.752 |
|                  |        |      | 4        | 4h               | 0         | 130.000        | 0.300 | 129.700 | 127.402        | 0.160 | 127.242 | 124.778        | 5H               | 0         | 130.000        | 127.667        | 0.265 | 127.402 | 126.145        | 0.475 | 125.670 |
|                  |        |      |          | 6g               | 0.060     | 129.940        | 0.475 | 129.465 | 127.342        | 0.250 | 127.092 | 124.628        | 6H               | 0         | 130.000        | 127.737        | 0.335 | 127.402 | 126.270        | 0.600 | 125.670 |
|                  |        |      |          | 8g               | 0.060     | 129.940        | 0.750 | 129.190 | 127.342        | 0.400 | 126.942 | 124.478        | 7H               | 0         | 130.000        | 127.827        | 0.425 | 127.402 | 126.420        | 0.750 | 125.670 |
|                  |        |      | 6        | 4h               | 0         | 130.000        | 0.375 | 129.625 | 126.103        | 0.190 | 125.913 | 122.217        | 5H               | 0         | 130.000        | 126.418        | 0.315 | 126.103 | 124.135        | 0.630 | 123.505 |
|                  |        |      |          | 6g               | 0.080     | 129.920        | 0.600 | 129.320 | 126.023        | 0.300 | 125.723 | 122.027        | 6H               | 0         | 130.000        | 126.503        | 0.400 | 126.103 | 124.305        | 0.800 | 123.505 |
|                  |        |      |          | 8g               | 0.080     | 129.920        | 0.950 | 128.970 | 126.023        | 0.475 | 125.548 | 121.852        | 7H               | 0         | 130.000        | 126.603        | 0.500 | 126.103 | 124.505        | 1.000 | 123.505 |
| 135              |        |      | 2        | 4h               | 0         | 135.000        | 0.180 | 134.820 | 133.701        | 0.118 | 133.583 | 132.351        | 5H               | 0         | 135.000        | 133.901        | 0.200 | 133.701 | 133.135        | 0.300 | 132.835 |
|                  |        |      |          | 6g               | 0.038     | 134.962        | 0.280 | 134.682 | 133.663        | 0.190 | 133.473 | 132.241        | 6H               | 0         | 135.000        | 133.951        | 0.250 | 133.701 | 133.210        | 0.375 | 132.835 |
|                  |        |      |          | 8g               | 0.038     | 134.962        | 0.450 | 134.512 | 133.663        | 0.300 | 133.363 | 132.131        | 7H               | 0         | 135.000        | 134.016        | 0.315 | 133.701 | 133.310        | 0.475 | 132.835 |
|                  |        |      | 3        | 4h               | 0         | 135.000        | 0.236 | 134.764 | 133.051        | 0.140 | 132.911 | 131.063        | 5H               | 0         | 135.000        | 133.287        | 0.236 | 133.051 | 132.152        | 0.400 | 131.752 |
|                  |        |      |          | 6g               | 0.048     | 134.952        | 0.375 | 134.577 | 133.003        | 0.224 | 132.779 | 130.931        | 6H               | 0         | 135.000        | 133.351        | 0.300 | 133.051 | 132.252        | 0.500 | 131.752 |
|                  |        |      |          | 8g               | 0.048     | 134.952        | 0.600 | 134.352 | 133.003        | 0.355 | 132.648 | 130.800        | 7H               | 0         | 135.000        | 133.426        | 0.375 | 133.051 | 132.382        | 0.630 | 131.752 |
|                  |        |      | 4        | 4h               | 0         | 135.000        | 0.300 | 134.700 | 132.402        | 0.160 | 132.242 | 129.778        | 5H               | 0         | 135.000        | 132.667        | 0.265 | 132.402 | 131.145        | 0.475 | 130.670 |
|                  |        |      |          | 6g               | 0.060     | 134.940        | 0.475 | 134.465 | 132.342        | 0.250 | 132.092 | 129.628        | 6H               | 0         | 135.000        | 132.737        | 0.335 | 132.402 | 131.270        | 0.600 | 130.670 |
|                  |        |      |          | 8g               | 0.060     | 134.940        | 0.750 | 134.190 | 132.342        | 0.400 | 131.942 | 129.478        | 7H               | 0         | 135.000        | 132.827        | 0.425 | 132.402 | 131.420        | 0.750 | 130.670 |
|                  |        |      | 6        | 4h               | 0         | 135.000        | 0.375 | 134.625 | 131.103        | 0.190 | 130.913 | 127.217        | 5H               | 0         | 135.000        | 131.418        | 0.315 | 131.103 | 129.135        | 0.630 | 128.505 |
|                  |        |      |          | 6g               | 0.080     | 134.920        | 0.600 | 134.320 | 131.023        | 0.300 | 130.723 | 127.027        | 6H               | 0         | 135.000        | 131.503        | 0.400 | 131.103 | 129.305        | 0.800 | 128.505 |
|                  |        |      |          | 8g               | 0.080     | 134.920        | 0.950 | 133.970 | 131.023        | 0.475 | 130.548 | 126.852        | 7H               | 0         | 135.000        | 131.603        | 0.500 | 131.103 | 129.505        | 1.000 | 128.505 |



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6          | 7              | 8     | 9       | 10             | 11    | 12      | 13             | 14               | 15         | 16             | 17             | 18    | 19      | 20             | 21    | 22      |
|------------------|--------|------|----------|------------------|------------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|------------|----------------|----------------|-------|---------|----------------|-------|---------|
| Nominal diameter | Pitch  |      |          | External threads |            |                |       |         |                |       |         |                | Internal threads |            |                |                |       |         |                |       |         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund. dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund. dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |
|                  |        |      |          |                  |            | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |            |                | max.           | tol.  | min.    | max.           | tol.  | min.    |
| 140              |        |      | 2        | 4h               | 0          | 140.000        | 0.180 | 139.820 | 138.701        | 0.118 | 138.583 | 137.351        | 5H               | 0          | 140.000        | 138.901        | 0.200 | 138.701 | 138.135        | 0.300 | 137.835 |
|                  |        |      |          | 6g               | 0.038      | 139.962        | 0.280 | 139.682 | 138.663        | 0.190 | 138.473 | 137.241        | 6H               | 0          | 140.000        | 138.951        | 0.250 | 138.701 | 138.210        | 0.375 | 137.835 |
|                  |        |      |          | 8g               | 0.038      | 139.962        | 0.450 | 139.512 | 138.663        | 0.300 | 138.363 | 137.131        | 7H               | 0          | 140.000        | 139.016        | 0.315 | 138.701 | 138.310        | 0.475 | 137.835 |
|                  |        |      | 3        | 4h               | 0          | 140.000        | 0.236 | 139.764 | 138.051        | 0.140 | 137.911 | 136.063        | 5H               | 0          | 140.000        | 138.287        | 0.236 | 138.051 | 137.152        | 0.400 | 136.752 |
|                  |        |      |          | 6g               | 0.048      | 139.952        | 0.375 | 139.577 | 138.003        | 0.224 | 137.779 | 135.931        | 6H               | 0          | 140.000        | 138.351        | 0.300 | 138.051 | 137.252        | 0.500 | 136.752 |
|                  |        |      |          | 8g               | 0.048      | 139.952        | 0.600 | 139.352 | 138.003        | 0.355 | 137.648 | 135.800        | 7H               | 0          | 140.000        | 138.426        | 0.375 | 138.051 | 137.382        | 0.630 | 136.752 |
|                  |        |      | 4        | 4h               | 0          | 140.000        | 0.300 | 139.700 | 137.402        | 0.160 | 137.242 | 134.778        | 5H               | 0          | 140.000        | 137.667        | 0.265 | 137.402 | 136.145        | 0.475 | 135.670 |
|                  |        |      |          | 6g               | 0.060      | 139.940        | 0.475 | 139.465 | 137.342        | 0.250 | 137.092 | 134.628        | 6H               | 0          | 140.000        | 137.737        | 0.335 | 137.402 | 136.270        | 0.600 | 135.670 |
|                  |        |      |          | 8g               | 0.060      | 139.940        | 0.750 | 139.190 | 137.342        | 0.400 | 136.942 | 134.478        | 7H               | 0          | 140.000        | 137.827        | 0.425 | 137.402 | 136.420        | 0.750 | 135.670 |
|                  |        |      | 6        | 4h               | 0          | 140.000        | 0.375 | 139.625 | 136.103        | 0.190 | 135.913 | 132.217        | 5H               | 0          | 140.000        | 136.418        | 0.315 | 136.103 | 134.135        | 0.630 | 133.505 |
|                  |        |      |          | 6g               | 0.080      | 139.920        | 0.600 | 139.320 | 136.023        | 0.300 | 135.723 | 132.027        | 6H               | 0          | 140.000        | 136.503        | 0.400 | 136.103 | 134.305        | 0.800 | 133.505 |
|                  |        |      |          | 8g               | 0.080      | 139.920        | 0.950 | 138.970 | 136.023        | 0.475 | 135.548 | 131.852        | 7H               | 0          | 140.000        | 136.603        | 0.500 | 136.103 | 134.505        | 1.000 | 133.505 |
| 145              |        |      | 2        | 4h               | 0          | 145.000        | 0.180 | 144.820 | 143.701        | 0.118 | 143.583 | 142.351        | 5H               | 0          | 145.000        | 143.901        | 0.200 | 143.701 | 143.135        | 0.300 | 142.835 |
|                  |        |      |          | 6g               | 0.038      | 144.962        | 0.280 | 144.682 | 143.663        | 0.190 | 143.473 | 142.241        | 6H               | 0          | 145.000        | 143.951        | 0.250 | 143.701 | 143.210        | 0.375 | 142.835 |
|                  |        |      |          | 8g               | 0.038      | 144.962        | 0.450 | 144.512 | 143.663        | 0.300 | 143.363 | 142.131        | 7H               | 0          | 145.000        | 144.016        | 0.315 | 143.701 | 143.310        | 0.475 | 142.835 |
|                  |        |      | 3        | 4h               | 0          | 145.000        | 0.236 | 144.764 | 143.051        | 0.140 | 142.911 | 141.063        | 5H               | 0          | 145.000        | 143.287        | 0.236 | 143.051 | 142.152        | 0.400 | 141.752 |
|                  |        |      |          | 6g               | 0.048      | 144.952        | 0.375 | 144.577 | 143.003        | 0.224 | 142.779 | 140.931        | 6H               | 0          | 145.000        | 143.351        | 0.300 | 143.051 | 142.252        | 0.500 | 141.752 |
|                  |        |      |          | 8g               | 0.048      | 144.952        | 0.600 | 144.352 | 143.003        | 0.355 | 142.648 | 140.800        | 7H               | 0          | 145.000        | 143.426        | 0.375 | 143.051 | 142.382        | 0.630 | 141.752 |
|                  |        |      | 4        | 4h               | 0          | 145.000        | 0.300 | 144.700 | 142.402        | 0.160 | 142.242 | 139.778        | 5H               | 0          | 145.000        | 142.667        | 0.265 | 142.402 | 141.145        | 0.475 | 140.670 |
|                  |        |      |          | 6g               | 0.060      | 144.940        | 0.475 | 144.465 | 142.342        | 0.250 | 142.092 | 139.628        | 6H               | 0          | 145.000        | 142.737        | 0.335 | 142.402 | 141.270        | 0.600 | 140.670 |
|                  |        |      |          | 8g               | 0.060      | 144.940        | 0.750 | 144.190 | 142.342        | 0.400 | 141.942 | 139.478        | 7H               | 0          | 145.000        | 142.827        | 0.425 | 142.402 | 141.420        | 0.750 | 140.670 |
|                  |        |      | 6        | 4h               | 0          | 145.000        | 0.375 | 144.625 | 141.103        | 0.190 | 140.913 | 137.217        | 5H               | 0          | 145.000        | 141.418        | 0.315 | 141.103 | 139.135        | 0.630 | 138.505 |
|                  |        |      |          | 6g               | 0.080      | 144.920        | 0.600 | 144.320 | 141.023        | 0.300 | 140.723 | 137.027        | 6H               | 0          | 145.000        | 141.503        | 0.400 | 141.103 | 139.305        | 0.800 | 138.505 |
|                  |        |      |          | 8g               | 0.080      | 144.920        | 0.950 | 143.970 | 141.023        | 0.475 | 140.548 | 136.852        | 7H               | 0          | 145.000        | 141.603        | 0.500 | 141.103 | 139.505        | 1.000 | 138.505 |



BSI 2007

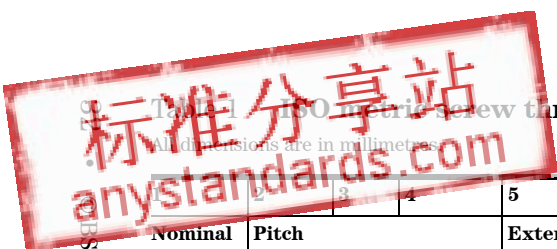
Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6                   | 7                             | 8                             | 9                             | 10                            | 11                            | 12                            | 13                            | 14                            | 15                            | 16                            | 17                            | 18                            | 19                            | 20                            | 21                            | 22                            |                               |                               |
|------------------|--------|------|----------|------------------|---------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Nominal diameter | Pitch  |      |          | External threads |                     |                               |                               |                               |                               |                               |                               |                               | Internal threads              |                               |                               |                               |                               |                               |                               |                               |                               |                               |                               |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev.           | Major diameter                |                               |                               | Pitch diameter                |                               |                               | Minor diameter                | Tolerance class               | Fund dev.                     | Major diameter                | Pitch diameter                |                               |                               | Minor diameter                |                               |                               |                               |                               |
|                  |        |      |          |                  |                     | max.                          | tol.                          | min.                          | max.                          | tol.                          | min.                          |                               |                               |                               |                               | min.                          | max.                          | tol.                          | min.                          | max.                          | tol.                          | min.                          |                               |
| 150              |        |      | 2        | 4h<br>6g<br>8g   | 0<br>0.038<br>0.038 | 150.000<br>149.962<br>149.962 | 0.180<br>0.280<br>0.450       | 149.820<br>149.682<br>149.512 | 148.701<br>148.663<br>148.663 | 0.118<br>0.190<br>0.300       | 148.583<br>148.473<br>148.363 | 147.351<br>147.241<br>147.131 | 5H<br>6H<br>7H                | 0<br>0<br>0                   | 150.000<br>150.000<br>150.000 | 148.901<br>148.951<br>149.016 | 0.200<br>0.250<br>0.315       | 148.701<br>148.701<br>148.701 | 148.135<br>148.210<br>148.310 | 0.300<br>0.375<br>0.475       | 147.835<br>147.835<br>147.835 |                               |                               |
|                  |        |      | 3        | 4h<br>6g<br>8g   | 0<br>0.048<br>0.048 | 150.000<br>149.952<br>149.952 | 0.236<br>0.375<br>0.600       | 149.764<br>149.577<br>149.352 | 148.051<br>148.003<br>148.003 | 0.140<br>0.224<br>0.355       | 147.911<br>147.779<br>147.648 | 146.063<br>145.931<br>145.800 | 5H<br>6H<br>7H                | 0<br>0<br>0                   | 150.000<br>150.000<br>150.000 | 148.287<br>148.351<br>148.426 | 0.236<br>0.300<br>0.375       | 148.051<br>148.051<br>148.051 | 147.152<br>147.252<br>147.382 | 0.400<br>0.500<br>0.630       | 146.752<br>146.752<br>146.752 |                               |                               |
|                  |        |      | 4        | 4h<br>6g<br>8g   | 0<br>0.060<br>0.060 | 150.000<br>149.940<br>149.940 | 0.300<br>0.475<br>0.750       | 149.700<br>149.465<br>149.190 | 147.402<br>147.342<br>147.342 | 0.160<br>0.250<br>0.400       | 147.242<br>147.092<br>146.942 | 144.778<br>144.628<br>144.478 | 5H<br>6H<br>7H                | 0<br>0<br>0                   | 150.000<br>150.000<br>150.000 | 147.667<br>147.737<br>147.827 | 0.265<br>0.335<br>0.425       | 147.402<br>147.402<br>147.402 | 146.145<br>146.270<br>146.420 | 0.475<br>0.600<br>0.750       | 145.670<br>145.670<br>145.670 |                               |                               |
|                  |        |      | 6        | 4h<br>6g<br>8g   | 0<br>0.080<br>0.080 | 150.000<br>149.920<br>149.920 | 0.375<br>0.600<br>0.950       | 149.625<br>149.320<br>148.970 | 146.103<br>146.023<br>146.023 | 0.190<br>0.300<br>0.475       | 145.913<br>145.723<br>145.548 | 142.217<br>142.027<br>141.852 | 5H<br>6H<br>7H                | 0<br>0<br>0                   | 150.000<br>150.000<br>150.000 | 146.418<br>146.503<br>146.603 | 0.315<br>0.400<br>0.500       | 146.103<br>146.103<br>146.103 | 144.135<br>144.305<br>144.505 | 0.630<br>0.800<br>1.000       | 143.505<br>143.505<br>143.505 |                               |                               |
|                  | 155    |      |          | 3                | 4h<br>6g<br>8g      | 0<br>0.048<br>0.048           | 155.000<br>154.952<br>154.952 | 0.236<br>0.375<br>0.600       | 154.764<br>154.577<br>154.352 | 153.051<br>153.003<br>153.003 | 0.140<br>0.224<br>0.355       | 152.911<br>152.779<br>152.648 | 151.063<br>150.931<br>150.800 | 5H<br>6H<br>7H                | 0<br>0<br>0                   | 155.000<br>155.000<br>155.000 | 153.287<br>153.351<br>153.426 | 0.236<br>0.300<br>0.375       | 153.051<br>153.051<br>153.051 | 152.152<br>152.252<br>152.382 | 0.400<br>0.500<br>0.630       | 151.752<br>151.752<br>151.752 |                               |
|                  |        |      |          | 4                | 4h<br>6g<br>8g      | 0<br>0.060<br>0.060           | 155.000<br>154.940<br>154.940 | 0.300<br>0.475<br>0.750       | 154.700<br>154.465<br>154.190 | 152.402<br>152.342<br>152.342 | 0.160<br>0.250<br>0.400       | 152.242<br>149.628<br>151.942 | 149.778<br>149.628<br>149.478 | 5H<br>6H<br>7H                | 0<br>0<br>0                   | 155.000<br>155.000<br>155.000 | 152.667<br>152.737<br>152.827 | 0.265<br>0.335<br>0.425       | 152.402<br>152.402<br>152.402 | 151.145<br>151.270<br>151.420 | 0.475<br>0.600<br>0.750       | 150.670<br>150.670<br>150.670 |                               |
|                  |        |      |          | 6                | 4h<br>6g<br>8g      | 0<br>0.080<br>0.080           | 155.000<br>154.920<br>154.920 | 0.375<br>0.600<br>0.950       | 154.625<br>154.320<br>153.970 | 151.103<br>151.023<br>151.023 | 0.190<br>0.300<br>0.475       | 150.913<br>150.723<br>150.548 | 147.217<br>147.027<br>146.852 | 5H<br>6H<br>7H                | 0<br>0<br>0                   | 155.000<br>155.000<br>155.000 | 151.418<br>151.503<br>151.603 | 0.315<br>0.400<br>0.500       | 151.103<br>151.103<br>151.103 | 149.135<br>149.305<br>149.505 | 0.630<br>0.800<br>1.000       | 148.505<br>148.505<br>148.505 |                               |
|                  |        | 160  |          |                  | 3                   | 4h<br>6g<br>8g                | 0<br>0.048<br>0.048           | 160.000<br>159.952<br>159.952 | 0.236<br>0.375<br>0.600       | 159.764<br>159.577<br>159.352 | 158.051<br>158.003<br>158.003 | 0.140<br>0.224<br>0.355       | 157.911<br>157.779<br>157.648 | 156.063<br>155.931<br>155.800 | 5H<br>6H<br>7H                | 0<br>0<br>0                   | 160.000<br>160.000<br>160.000 | 158.287<br>158.351<br>158.426 | 0.236<br>0.300<br>0.375       | 158.051<br>158.051<br>158.051 | 157.152<br>157.252<br>157.382 | 0.400<br>0.500<br>0.630       | 156.752<br>156.752<br>156.752 |
|                  |        |      |          |                  | 4                   | 4h<br>6g<br>8g                | 0<br>0.060<br>0.060           | 160.000<br>159.940<br>159.940 | 0.300<br>0.475<br>0.750       | 159.700<br>159.465<br>159.190 | 157.402<br>157.342<br>157.342 | 0.160<br>0.250<br>0.400       | 157.242<br>157.092<br>156.942 | 154.778<br>154.628<br>154.478 | 5H<br>6H<br>7H                | 0<br>0<br>0                   | 160.000<br>160.000<br>160.000 | 157.667<br>157.737<br>157.827 | 0.265<br>0.335<br>0.425       | 157.402<br>157.402<br>157.402 | 156.145<br>156.270<br>156.420 | 0.475<br>0.600<br>0.750       | 155.670<br>155.670<br>155.670 |
|                  |        |      |          |                  | 6                   | 4h<br>6g<br>8g                | 0<br>0.080<br>0.080           | 160.000<br>159.920<br>159.920 | 0.375<br>0.600<br>0.950       | 159.625<br>159.320<br>158.970 | 156.103<br>156.023<br>156.023 | 0.190<br>0.300<br>0.475       | 155.913<br>155.723<br>155.548 | 152.217<br>152.027<br>151.852 | 5H<br>6H<br>7H                | 0<br>0<br>0                   | 160.000<br>160.000<br>160.000 | 156.418<br>156.503<br>156.603 | 0.315<br>0.400<br>0.500       | 156.103<br>156.103<br>156.103 | 154.135<br>154.305<br>154.505 | 0.630<br>0.800<br>1.000       | 153.505<br>153.505<br>153.505 |



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6          | 7              | 8     | 9       | 10             | 11    | 12      | 13             | 14               | 15         | 16             | 17             | 18    | 19      | 20             | 21    | 22      |
|------------------|--------|------|----------|------------------|------------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|------------|----------------|----------------|-------|---------|----------------|-------|---------|
| Nominal diameter | Pitch  |      |          | External threads |            |                |       |         |                |       |         |                | Internal threads |            |                |                |       |         |                |       |         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund. dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund. dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |
|                  |        |      |          |                  |            | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |            |                | max.           | tol.  | min.    | max.           | tol.  | min.    |
| 165              |        |      | 3        | 4h               | 0          | 165.000        | 0.236 | 164.764 | 163.051        | 0.140 | 162.911 | 161.063        | 5H               | 0          | 165.000        | 163.287        | 0.236 | 163.051 | 162.152        | 0.400 | 161.752 |
|                  |        |      |          | 6g               | 0.048      | 164.952        | 0.375 | 164.577 | 163.003        | 0.224 | 162.779 | 160.931        | 6H               | 0          | 165.000        | 163.351        | 0.300 | 163.051 | 162.252        | 0.500 | 161.752 |
|                  |        |      |          | 8g               | 0.048      | 164.952        | 0.600 | 164.352 | 163.003        | 0.355 | 162.648 | 160.800        | 7H               | 0          | 165.000        | 163.426        | 0.375 | 163.051 | 162.382        | 0.630 | 161.752 |
|                  |        |      | 4        | 4h               | 0          | 165.000        | 0.300 | 164.700 | 162.402        | 0.160 | 162.242 | 159.778        | 5H               | 0          | 165.000        | 162.667        | 0.265 | 162.402 | 161.145        | 0.475 | 160.670 |
|                  |        |      |          | 6g               | 0.060      | 164.940        | 0.475 | 164.465 | 162.342        | 0.250 | 162.092 | 159.628        | 6H               | 0          | 165.000        | 162.737        | 0.335 | 162.402 | 161.270        | 0.600 | 160.670 |
|                  |        |      |          | 8g               | 0.060      | 164.940        | 0.750 | 164.190 | 162.342        | 0.400 | 161.942 | 159.478        | 7H               | 0          | 165.000        | 162.827        | 0.425 | 162.402 | 161.420        | 0.750 | 160.670 |
|                  |        |      | 6        | 4h               | 0          | 165.000        | 0.375 | 164.625 | 161.103        | 0.190 | 160.913 | 157.217        | 5H               | 0          | 165.000        | 161.418        | 0.315 | 161.103 | 159.135        | 0.630 | 158.505 |
|                  |        |      |          | 6g               | 0.080      | 164.920        | 0.600 | 164.320 | 161.023        | 0.300 | 160.723 | 157.027        | 6H               | 0          | 165.000        | 161.503        | 0.400 | 161.103 | 159.305        | 0.800 | 158.505 |
|                  |        |      |          | 8g               | 0.080      | 164.920        | 0.950 | 163.970 | 161.023        | 0.475 | 160.548 | 156.852        | 7H               | 0          | 165.000        | 161.603        | 0.500 | 161.103 | 159.505        | 1.000 | 158.505 |
| 170              |        |      | 3        | 4h               | 0          | 170.000        | 0.236 | 169.764 | 168.051        | 0.140 | 167.911 | 166.063        | 5H               | 0          | 170.000        | 168.287        | 0.236 | 168.051 | 167.152        | 0.400 | 166.752 |
|                  |        |      |          | 6g               | 0.048      | 169.952        | 0.375 | 169.577 | 168.003        | 0.224 | 167.779 | 165.931        | 6H               | 0          | 170.000        | 168.351        | 0.300 | 168.051 | 167.252        | 0.500 | 166.752 |
|                  |        |      |          | 8g               | 0.048      | 169.952        | 0.600 | 169.352 | 168.003        | 0.355 | 167.648 | 165.800        | 7H               | 0          | 170.000        | 168.426        | 0.375 | 168.051 | 167.382        | 0.630 | 166.752 |
|                  |        |      | 4        | 4h               | 0          | 170.000        | 0.300 | 169.700 | 167.402        | 0.160 | 167.242 | 164.778        | 5H               | 0          | 170.000        | 167.667        | 0.265 | 167.402 | 166.145        | 0.475 | 165.670 |
|                  |        |      |          | 6g               | 0.060      | 169.940        | 0.475 | 169.465 | 167.342        | 0.250 | 167.092 | 164.628        | 6H               | 0          | 170.000        | 167.737        | 0.335 | 167.402 | 166.270        | 0.600 | 165.670 |
|                  |        |      |          | 8g               | 0.060      | 169.940        | 0.750 | 169.190 | 167.342        | 0.400 | 166.942 | 164.478        | 7H               | 0          | 170.000        | 167.827        | 0.425 | 167.402 | 166.420        | 0.750 | 165.670 |
|                  |        |      | 6        | 4h               | 0          | 170.000        | 0.375 | 169.625 | 166.103        | 0.190 | 165.913 | 162.217        | 5H               | 0          | 170.000        | 166.418        | 0.315 | 166.103 | 164.135        | 0.630 | 163.505 |
|                  |        |      |          | 6g               | 0.080      | 169.920        | 0.600 | 169.320 | 166.023        | 0.300 | 165.723 | 162.027        | 6H               | 0          | 170.000        | 166.503        | 0.400 | 166.103 | 164.305        | 0.800 | 163.505 |
|                  |        |      |          | 8g               | 0.080      | 169.920        | 0.950 | 168.970 | 166.023        | 0.475 | 165.548 | 161.852        | 7H               | 0          | 170.000        | 166.603        | 0.500 | 166.103 | 164.505        | 1.000 | 163.505 |
| 175              |        |      | 3        | 4h               | 0          | 175.000        | 0.236 | 174.764 | 173.051        | 0.140 | 172.911 | 171.063        | 5H               | 0          | 175.000        | 173.287        | 0.236 | 173.051 | 172.152        | 0.400 | 171.752 |
|                  |        |      |          | 6g               | 0.048      | 174.952        | 0.375 | 174.577 | 173.003        | 0.224 | 172.779 | 170.931        | 6H               | 0          | 175.000        | 173.351        | 0.300 | 173.051 | 172.252        | 0.500 | 171.752 |
|                  |        |      |          | 8g               | 0.048      | 174.952        | 0.600 | 174.352 | 173.003        | 0.355 | 172.648 | 170.800        | 7H               | 0          | 175.000        | 173.426        | 0.375 | 173.051 | 172.382        | 0.630 | 171.752 |
|                  |        |      | 4        | 4h               | 0          | 175.000        | 0.300 | 174.700 | 172.402        | 0.160 | 172.242 | 169.778        | 5H               | 0          | 175.000        | 172.667        | 0.265 | 172.402 | 171.145        | 0.475 | 170.670 |
|                  |        |      |          | 6g               | 0.060      | 174.940        | 0.475 | 174.465 | 172.342        | 0.250 | 172.092 | 169.628        | 6H               | 0          | 175.000        | 172.737        | 0.335 | 172.402 | 171.270        | 0.600 | 170.670 |
|                  |        |      |          | 8g               | 0.060      | 174.940        | 0.750 | 174.190 | 172.342        | 0.400 | 171.942 | 169.478        | 7H               | 0          | 175.000        | 172.827        | 0.425 | 172.402 | 171.420        | 0.750 | 170.670 |
|                  |        |      | 6        | 4h               | 0          | 175.000        | 0.375 | 174.625 | 171.103        | 0.190 | 170.913 | 167.217        | 5H               | 0          | 175.000        | 171.418        | 0.315 | 171.103 | 169.135        | 0.630 | 168.505 |
|                  |        |      |          | 6g               | 0.080      | 174.920        | 0.600 | 174.320 | 171.023        | 0.300 | 170.723 | 167.027        | 6H               | 0          | 175.000        | 171.503        | 0.400 | 171.103 | 169.305        | 0.800 | 168.505 |
|                  |        |      |          | 8g               | 0.080      | 174.920        | 0.950 | 173.970 | 171.023        | 0.475 | 170.548 | 166.852        | 7H               | 0          | 175.000        | 171.603        | 0.500 | 171.103 | 169.505        | 1.000 | 168.505 |



BSI 2007

ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9       | 10             | 11    | 12      | 13             | 14               | 15        | 16             | 17             | 18    | 19      | 20             | 21    | 22      |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|-----------|----------------|----------------|-------|---------|----------------|-------|---------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |         |                |       |         |                | Internal threads |           |                |                |       |         |                |       |         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |
|                  |        |      |          |                  |           | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |           |                | min.           | max.  | tol.    | min.           | max.  | tol.    |
| 180              |        |      | 3        | 4h               | 0         | 180.000        | 0.236 | 179.764 | 178.051        | 0.140 | 177.911 | 176.063        | 5H               | 0         | 180.000        | 178.287        | 0.236 | 178.051 | 177.152        | 0.400 | 176.752 |
|                  |        |      |          | 6g               | 0.048     | 179.952        | 0.375 | 179.577 | 178.003        | 0.224 | 177.779 | 175.931        | 6H               | 0         | 180.000        | 178.351        | 0.300 | 178.051 | 177.252        | 0.500 | 176.752 |
|                  |        |      |          | 8g               | 0.048     | 179.952        | 0.600 | 179.352 | 178.003        | 0.355 | 177.648 | 175.800        | 7H               | 0         | 180.000        | 178.426        | 0.375 | 178.051 | 177.382        | 0.630 | 176.752 |
|                  |        |      | 4        | 4h               | 0         | 180.000        | 0.300 | 179.700 | 177.402        | 0.160 | 177.242 | 174.778        | 5H               | 0         | 180.000        | 177.667        | 0.265 | 177.402 | 176.145        | 0.475 | 175.670 |
|                  |        |      |          | 6g               | 0.060     | 179.940        | 0.475 | 179.465 | 177.342        | 0.250 | 177.092 | 174.628        | 6H               | 0         | 180.000        | 177.737        | 0.335 | 177.402 | 176.270        | 0.600 | 175.670 |
|                  |        |      |          | 8g               | 0.060     | 179.940        | 0.750 | 179.190 | 177.342        | 0.400 | 176.942 | 174.478        | 7H               | 0         | 180.000        | 177.827        | 0.425 | 177.402 | 176.420        | 0.750 | 175.670 |
|                  |        |      | 6        | 4h               | 0         | 180.000        | 0.375 | 179.625 | 176.103        | 0.190 | 175.913 | 172.217        | 5H               | 0         | 180.000        | 176.418        | 0.315 | 176.103 | 174.135        | 0.630 | 173.505 |
|                  |        |      |          | 6g               | 0.080     | 179.920        | 0.600 | 179.320 | 176.023        | 0.300 | 175.723 | 172.027        | 6H               | 0         | 180.000        | 176.503        | 0.400 | 176.103 | 174.305        | 0.800 | 173.505 |
|                  |        |      |          | 8g               | 0.080     | 179.920        | 0.950 | 178.970 | 176.023        | 0.475 | 175.548 | 171.852        | 7H               | 0         | 180.000        | 176.603        | 0.500 | 176.103 | 174.505        | 1.000 | 173.505 |
| 185              |        |      | 3        | 4h               | 0         | 185.000        | 0.236 | 184.764 | 183.051        | 0.160 | 182.891 | 181.043        | 5H               | 0         | 185.000        | 183.316        | 0.265 | 183.051 | 182.152        | 0.400 | 181.752 |
|                  |        |      |          | 6g               | 0.048     | 184.952        | 0.375 | 184.577 | 183.003        | 0.250 | 182.753 | 180.905        | 6H               | 0         | 185.000        | 183.386        | 0.335 | 183.051 | 182.252        | 0.500 | 181.752 |
|                  |        |      |          | 8g               | 0.048     | 184.952        | 0.600 | 184.352 | 183.003        | 0.400 | 182.603 | 180.755        | 7H               | 0         | 185.000        | 183.476        | 0.425 | 183.051 | 182.382        | 0.630 | 181.752 |
|                  |        |      | 4        | 4h               | 0         | 185.000        | 0.300 | 184.700 | 182.402        | 0.180 | 182.222 | 179.758        | 5H               | 0         | 185.000        | 182.702        | 0.300 | 182.402 | 181.145        | 0.475 | 180.670 |
|                  |        |      |          | 6g               | 0.060     | 184.940        | 0.475 | 184.465 | 182.342        | 0.280 | 182.062 | 179.598        | 6H               | 0         | 185.000        | 182.777        | 0.375 | 182.402 | 181.270        | 0.600 | 180.670 |
|                  |        |      |          | 8g               | 0.060     | 184.940        | 0.750 | 184.190 | 182.342        | 0.450 | 181.892 | 179.428        | 7H               | 0         | 185.000        | 182.877        | 0.475 | 182.402 | 181.420        | 0.750 | 180.670 |
|                  |        |      | 6        | 4h               | 0         | 185.000        | 0.375 | 184.625 | 181.103        | 0.200 | 180.903 | 177.207        | 5H               | 0         | 185.000        | 181.438        | 0.335 | 181.103 | 179.135        | 0.630 | 178.505 |
|                  |        |      |          | 6g               | 0.080     | 184.920        | 0.600 | 184.320 | 181.023        | 0.315 | 180.708 | 177.012        | 6H               | 0         | 185.000        | 181.528        | 0.425 | 181.103 | 179.305        | 0.800 | 178.505 |
|                  |        |      |          | 8g               | 0.080     | 184.920        | 0.950 | 183.970 | 181.023        | 0.500 | 180.523 | 176.827        | 7H               | 0         | 185.000        | 181.633        | 0.530 | 181.103 | 179.505        | 1.000 | 178.505 |
| 190              |        |      | 3        | 4h               | 0         | 190.000        | 0.236 | 189.764 | 188.051        | 0.160 | 187.891 | 186.043        | 5H               | 0         | 190.000        | 188.316        | 0.265 | 188.051 | 187.152        | 0.400 | 186.752 |
|                  |        |      |          | 6g               | 0.048     | 189.952        | 0.375 | 189.577 | 188.003        | 0.250 | 187.753 | 185.905        | 6H               | 0         | 190.000        | 188.386        | 0.335 | 188.051 | 187.252        | 0.500 | 186.752 |
|                  |        |      |          | 8g               | 0.048     | 189.952        | 0.600 | 189.352 | 188.003        | 0.400 | 187.603 | 185.755        | 7H               | 0         | 190.000        | 188.476        | 0.425 | 188.051 | 187.382        | 0.630 | 186.752 |
|                  |        |      | 4        | 4h               | 0         | 190.000        | 0.300 | 189.700 | 187.402        | 0.180 | 187.222 | 184.758        | 5H               | 0         | 190.000        | 187.702        | 0.300 | 187.402 | 186.145        | 0.475 | 185.670 |
|                  |        |      |          | 6g               | 0.060     | 189.940        | 0.475 | 189.465 | 187.342        | 0.280 | 187.062 | 184.598        | 6H               | 0         | 190.000        | 187.777        | 0.375 | 187.402 | 186.270        | 0.600 | 185.670 |
|                  |        |      |          | 8g               | 0.060     | 189.940        | 0.750 | 189.190 | 187.342        | 0.450 | 186.892 | 184.428        | 7H               | 0         | 190.000        | 187.877        | 0.475 | 187.402 | 186.420        | 0.750 | 185.670 |
|                  |        |      | 6        | 4h               | 0         | 190.000        | 0.375 | 189.625 | 186.103        | 0.200 | 185.903 | 182.207        | 5H               | 0         | 190.000        | 186.438        | 0.335 | 186.103 | 184.135        | 0.630 | 183.505 |
|                  |        |      |          | 6g               | 0.080     | 189.920        | 0.600 | 189.320 | 186.023        | 0.315 | 185.708 | 182.012        | 6H               | 0         | 190.000        | 186.528        | 0.425 | 186.103 | 184.305        | 0.800 | 183.505 |
|                  |        |      |          | 8g               | 0.080     | 189.920        | 0.950 | 188.970 | 186.023        | 0.500 | 185.523 | 181.827        | 7H               | 0         | 190.000        | 186.633        | 0.530 | 186.103 | 184.505        | 1.000 | 183.505 |



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9       | 10             | 11    | 12      | 13             | 14               | 15        | 16             | 17             | 18    | 19      | 20             | 21    | 22      |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|-----------|----------------|----------------|-------|---------|----------------|-------|---------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |         |                |       |         |                | Internal threads |           |                |                |       |         |                |       |         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |
|                  |        |      |          |                  |           | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |           |                | min.           | max.  | tol.    | min.           |       |         |
|                  |        |      |          |                  |           |                |       |         |                |       |         |                |                  |           |                |                |       |         |                |       |         |
| 195              |        |      | 3        | 4h               | 0         | 195.000        | 0.236 | 194.764 | 193.051        | 0.160 | 192.891 | 191.043        | 5H               | 0         | 195.000        | 193.316        | 0.265 | 193.051 | 192.152        | 0.400 | 191.752 |
|                  |        |      |          | 6g               | 0.048     | 194.952        | 0.375 | 194.577 | 193.003        | 0.250 | 192.753 | 190.905        | 6H               | 0         | 195.000        | 193.386        | 0.335 | 193.051 | 192.252        | 0.500 | 191.752 |
|                  |        |      |          | 8g               | 0.048     | 194.952        | 0.600 | 194.352 | 193.003        | 0.400 | 192.603 | 190.755        | 7H               | 0         | 195.000        | 193.476        | 0.425 | 193.051 | 192.382        | 0.630 | 191.752 |
|                  |        |      | 4        | 4h               | 0         | 195.000        | 0.300 | 194.700 | 192.402        | 0.180 | 192.222 | 189.758        | 5H               | 0         | 195.000        | 192.702        | 0.300 | 192.402 | 191.145        | 0.475 | 190.670 |
|                  |        |      |          | 6g               | 0.060     | 194.940        | 0.475 | 194.465 | 192.342        | 0.280 | 192.062 | 189.598        | 6H               | 0         | 195.000        | 192.777        | 0.375 | 192.402 | 191.270        | 0.600 | 190.670 |
|                  |        |      |          | 8g               | 0.060     | 194.940        | 0.750 | 194.190 | 192.342        | 0.450 | 191.892 | 189.428        | 7H               | 0         | 195.000        | 192.877        | 0.475 | 192.402 | 191.420        | 0.750 | 190.670 |
|                  |        |      | 6        | 4h               | 0         | 195.000        | 0.375 | 194.625 | 191.103        | 0.200 | 190.903 | 187.207        | 5H               | 0         | 195.000        | 191.438        | 0.335 | 191.103 | 189.135        | 0.630 | 188.505 |
|                  |        |      |          | 6g               | 0.080     | 194.920        | 0.600 | 194.320 | 191.023        | 0.315 | 190.708 | 187.012        | 6H               | 0         | 195.000        | 191.528        | 0.425 | 191.103 | 189.305        | 0.800 | 188.505 |
|                  |        |      |          | 8g               | 0.080     | 194.920        | 0.950 | 193.970 | 191.023        | 0.500 | 190.523 | 186.827        | 7H               | 0         | 195.000        | 191.633        | 0.530 | 191.103 | 189.505        | 1.000 | 188.505 |
| 200              |        |      | 3        | 4h               | 0         | 200.000        | 0.236 | 199.764 | 198.051        | 0.160 | 197.891 | 196.043        | 5H               | 0         | 200.000        | 198.316        | 0.265 | 198.051 | 197.152        | 0.400 | 196.752 |
|                  |        |      |          | 6g               | 0.048     | 199.952        | 0.375 | 199.577 | 198.003        | 0.250 | 197.753 | 195.905        | 6H               | 0         | 200.000        | 198.386        | 0.335 | 198.051 | 197.252        | 0.500 | 196.752 |
|                  |        |      |          | 8g               | 0.048     | 199.952        | 0.600 | 199.352 | 198.003        | 0.400 | 197.603 | 195.755        | 7H               | 0         | 200.000        | 198.476        | 0.425 | 198.051 | 197.382        | 0.630 | 196.752 |
|                  |        |      | 4        | 4h               | 0         | 200.000        | 0.300 | 199.700 | 197.402        | 0.180 | 197.222 | 194.758        | 5H               | 0         | 200.000        | 197.702        | 0.300 | 197.402 | 196.145        | 0.475 | 195.670 |
|                  |        |      |          | 6g               | 0.060     | 199.940        | 0.475 | 199.465 | 197.342        | 0.280 | 197.062 | 194.598        | 6H               | 0         | 200.000        | 197.777        | 0.375 | 197.402 | 196.270        | 0.600 | 195.670 |
|                  |        |      |          | 8g               | 0.060     | 199.940        | 0.750 | 199.190 | 197.342        | 0.450 | 196.892 | 194.428        | 7H               | 0         | 200.000        | 197.877        | 0.475 | 197.402 | 196.420        | 0.750 | 195.670 |
|                  |        |      | 6        | 4h               | 0         | 200.000        | 0.375 | 199.625 | 196.103        | 0.200 | 195.903 | 192.207        | 5H               | 0         | 200.000        | 196.438        | 0.335 | 196.103 | 194.135        | 0.630 | 193.505 |
|                  |        |      |          | 6g               | 0.080     | 199.920        | 0.600 | 199.320 | 196.023        | 0.315 | 195.708 | 192.012        | 6H               | 0         | 200.000        | 196.528        | 0.425 | 196.103 | 194.305        | 0.800 | 193.505 |
|                  |        |      |          | 8g               | 0.080     | 199.920        | 0.950 | 198.970 | 196.023        | 0.500 | 195.523 | 191.827        | 7H               | 0         | 200.000        | 196.633        | 0.530 | 196.103 | 194.505        | 1.000 | 193.505 |
| 205              |        |      | 3        | 4h               | 0         | 205.000        | 0.236 | 204.764 | 203.051        | 0.160 | 202.891 | 201.043        | 5H               | 0         | 205.000        | 203.316        | 0.265 | 203.051 | 202.152        | 0.400 | 201.752 |
|                  |        |      |          | 6g               | 0.048     | 204.952        | 0.375 | 204.577 | 203.003        | 0.250 | 202.753 | 200.905        | 6H               | 0         | 205.000        | 203.386        | 0.335 | 203.051 | 202.252        | 0.500 | 201.752 |
|                  |        |      |          | 8g               | 0.048     | 204.952        | 0.600 | 204.352 | 203.003        | 0.400 | 202.603 | 200.755        | 7H               | 0         | 205.000        | 203.476        | 0.425 | 203.051 | 202.382        | 0.630 | 201.752 |
|                  |        |      | 4        | 4h               | 0         | 205.000        | 0.300 | 204.700 | 202.402        | 0.180 | 202.222 | 199.758        | 5H               | 0         | 205.000        | 202.702        | 0.300 | 202.402 | 201.145        | 0.475 | 200.670 |
|                  |        |      |          | 6g               | 0.060     | 204.940        | 0.475 | 204.465 | 202.342        | 0.280 | 202.062 | 199.598        | 6H               | 0         | 205.000        | 202.777        | 0.375 | 202.402 | 201.270        | 0.600 | 200.670 |
|                  |        |      |          | 8g               | 0.060     | 204.940        | 0.750 | 204.190 | 202.342        | 0.450 | 201.892 | 199.428        | 7H               | 0         | 205.000        | 202.877        | 0.475 | 202.402 | 201.420        | 0.750 | 200.670 |
|                  |        |      | 6        | 4h               | 0         | 205.000        | 0.375 | 204.625 | 201.103        | 0.200 | 200.903 | 197.207        | 5H               | 0         | 205.000        | 201.438        | 0.335 | 201.103 | 199.135        | 0.630 | 198.505 |
|                  |        |      |          | 6g               | 0.080     | 204.920        | 0.600 | 204.320 | 201.023        | 0.315 | 200.708 | 197.012        | 6H               | 0         | 205.000        | 201.528        | 0.425 | 201.103 | 199.305        | 0.800 | 198.505 |
|                  |        |      |          | 8g               | 0.080     | 204.920        | 0.950 | 203.970 | 201.023        | 0.500 | 200.523 | 196.827        | 7H               | 0         | 205.000        | 201.633        | 0.530 | 201.103 | 199.505        | 1.000 | 198.505 |



BSI 2007

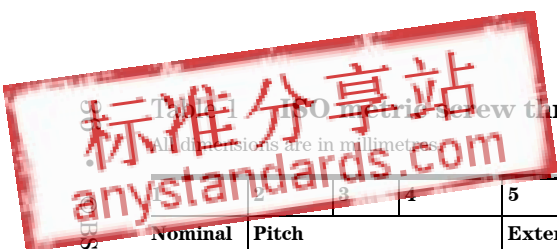
Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 1      | 2    | 3        | 4               | 5                | 6              | 7     | 8       | 9              | 10    | 11      | 12             | 13              | 14               | 15             | 16             | 17    | 18      | 19             | 20    | 21      | 22 |
|------------------|--------|------|----------|-----------------|------------------|----------------|-------|---------|----------------|-------|---------|----------------|-----------------|------------------|----------------|----------------|-------|---------|----------------|-------|---------|----|
| Nominal diameter | Pitch  |      |          |                 | External threads |                |       |         |                |       |         |                |                 | Internal threads |                |                |       |         |                |       |         |    |
|                  | Coarse | Fine | Constant | Tolerance class | Fund dev.        | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class | Fund dev.        | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |    |
|                  |        |      |          |                 |                  | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                 |                  |                | min.           | max.  | tol.    | min.           |       |         |    |
| 210              |        |      | 3        | 4h              | 0                | 210.000        | 0.236 | 209.764 | 208.051        | 0.160 | 207.891 | 206.043        | 5H              | 0                | 210.000        | 208.316        | 0.265 | 208.051 | 207.152        | 0.400 | 206.752 |    |
|                  |        |      |          | 6g              | 0.048            | 209.952        | 0.375 | 209.577 | 208.003        | 0.250 | 207.753 | 205.905        | 6H              | 0                | 210.000        | 208.386        | 0.335 | 208.051 | 207.252        | 0.500 | 206.752 |    |
|                  |        |      |          | 8g              | 0.048            | 209.952        | 0.600 | 209.352 | 208.003        | 0.400 | 207.603 | 205.755        | 7H              | 0                | 210.000        | 208.476        | 0.425 | 208.051 | 207.382        | 0.630 | 206.752 |    |
|                  |        |      | 4        | 4h              | 0                | 210.000        | 0.300 | 209.700 | 207.402        | 0.180 | 207.222 | 204.758        | 5H              | 0                | 210.000        | 207.702        | 0.300 | 207.402 | 206.145        | 0.475 | 205.670 |    |
|                  |        |      |          | 6g              | 0.060            | 209.940        | 0.475 | 209.465 | 207.342        | 0.280 | 207.062 | 204.598        | 6H              | 0                | 210.000        | 207.777        | 0.375 | 207.402 | 206.270        | 0.600 | 205.670 |    |
|                  |        |      |          | 8g              | 0.060            | 209.940        | 0.750 | 209.190 | 207.342        | 0.450 | 206.892 | 204.428        | 7H              | 0                | 210.000        | 207.877        | 0.475 | 207.402 | 206.420        | 0.750 | 205.670 |    |
|                  |        |      | 6        | 4h              | 0                | 210.000        | 0.375 | 209.625 | 206.103        | 0.200 | 205.903 | 202.207        | 5H              | 0                | 210.000        | 206.438        | 0.335 | 206.103 | 204.135        | 0.630 | 203.505 |    |
|                  |        |      |          | 6g              | 0.080            | 209.920        | 0.600 | 209.320 | 206.023        | 0.315 | 205.708 | 202.012        | 6H              | 0                | 210.000        | 206.528        | 0.425 | 206.103 | 204.305        | 0.800 | 203.505 |    |
|                  |        |      |          | 8g              | 0.080            | 209.920        | 0.950 | 208.970 | 206.023        | 0.500 | 205.523 | 201.827        | 7H              | 0                | 210.000        | 206.633        | 0.530 | 206.103 | 204.505        | 1.000 | 203.505 |    |
| 215              |        |      | 3        | 4h              | 0                | 215.000        | 0.236 | 214.764 | 213.051        | 0.160 | 212.891 | 211.043        | 5H              | 0                | 215.000        | 213.316        | 0.265 | 213.051 | 212.152        | 0.400 | 211.752 |    |
|                  |        |      |          | 6g              | 0.048            | 214.952        | 0.375 | 214.577 | 213.003        | 0.250 | 212.753 | 210.905        | 6H              | 0                | 215.000        | 213.386        | 0.335 | 213.051 | 212.252        | 0.500 | 211.752 |    |
|                  |        |      |          | 8g              | 0.048            | 214.952        | 0.600 | 214.352 | 213.003        | 0.400 | 212.603 | 210.755        | 7H              | 0                | 215.000        | 213.476        | 0.425 | 213.051 | 212.382        | 0.630 | 211.752 |    |
|                  |        |      | 4        | 4h              | 0                | 215.000        | 0.300 | 214.700 | 212.402        | 0.180 | 212.222 | 209.758        | 5H              | 0                | 215.000        | 212.702        | 0.300 | 212.402 | 211.145        | 0.475 | 210.670 |    |
|                  |        |      |          | 6g              | 0.060            | 214.940        | 0.475 | 214.465 | 212.342        | 0.280 | 212.062 | 209.598        | 6H              | 0                | 215.000        | 212.777        | 0.375 | 212.402 | 211.270        | 0.600 | 210.670 |    |
|                  |        |      |          | 8g              | 0.060            | 214.940        | 0.750 | 214.190 | 212.342        | 0.450 | 211.892 | 209.428        | 7H              | 0                | 215.000        | 212.877        | 0.475 | 212.402 | 211.420        | 0.750 | 210.670 |    |
|                  |        |      | 6        | 4h              | 0                | 215.000        | 0.375 | 214.625 | 211.103        | 0.200 | 210.903 | 207.207        | 5H              | 0                | 215.000        | 211.438        | 0.335 | 211.103 | 209.135        | 0.630 | 208.505 |    |
|                  |        |      |          | 6g              | 0.080            | 214.920        | 0.600 | 214.320 | 211.023        | 0.315 | 210.708 | 207.012        | 6H              | 0                | 215.000        | 211.528        | 0.425 | 211.103 | 209.305        | 0.800 | 208.505 |    |
|                  |        |      |          | 8g              | 0.080            | 214.920        | 0.950 | 213.970 | 211.023        | 0.500 | 210.523 | 206.827        | 7H              | 0                | 215.000        | 211.633        | 0.530 | 211.103 | 209.505        | 1.000 | 208.505 |    |
| 220              |        |      | 3        | 4h              | 0                | 220.000        | 0.236 | 219.764 | 218.051        | 0.160 | 217.891 | 216.043        | 5H              | 0                | 220.000        | 218.316        | 0.265 | 218.051 | 217.152        | 0.400 | 216.752 |    |
|                  |        |      |          | 6g              | 0.048            | 219.952        | 0.375 | 219.577 | 218.003        | 0.250 | 217.753 | 215.905        | 6H              | 0                | 220.000        | 218.386        | 0.335 | 218.051 | 217.252        | 0.500 | 216.752 |    |
|                  |        |      |          | 8g              | 0.048            | 219.952        | 0.600 | 219.352 | 218.003        | 0.400 | 217.603 | 215.755        | 7H              | 0                | 220.000        | 218.476        | 0.425 | 218.051 | 217.382        | 0.630 | 216.752 |    |
|                  |        |      | 4        | 4h              | 0                | 220.000        | 0.300 | 219.700 | 217.402        | 0.180 | 217.222 | 214.758        | 5H              | 0                | 220.000        | 217.702        | 0.300 | 217.402 | 216.145        | 0.475 | 215.670 |    |
|                  |        |      |          | 6g              | 0.060            | 219.940        | 0.475 | 219.465 | 217.342        | 0.280 | 217.062 | 214.598        | 6H              | 0                | 220.000        | 217.777        | 0.375 | 217.402 | 216.270        | 0.600 | 215.670 |    |
|                  |        |      |          | 8g              | 0.060            | 219.940        | 0.750 | 219.190 | 217.342        | 0.450 | 216.892 | 214.428        | 7H              | 0                | 220.000        | 217.877        | 0.475 | 217.402 | 216.420        | 0.750 | 215.670 |    |
|                  |        |      | 6        | 4h              | 0                | 220.000        | 0.375 | 219.625 | 216.103        | 0.200 | 215.903 | 212.207        | 5H              | 0                | 220.000        | 216.438        | 0.335 | 216.103 | 214.135        | 0.630 | 213.505 |    |
|                  |        |      |          | 6g              | 0.080            | 219.920        | 0.600 | 219.320 | 216.023        | 0.315 | 215.708 | 212.012        | 6H              | 0                | 220.000        | 216.528        | 0.425 | 216.103 | 214.305        | 0.800 | 213.505 |    |
|                  |        |      |          | 8g              | 0.080            | 219.920        | 0.950 | 218.970 | 216.023        | 0.500 | 215.523 | 211.827        | 7H              | 0                | 220.000        | 216.633        | 0.530 | 216.103 | 214.505        | 1.000 | 213.505 |    |



Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

| 1                | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9       | 10             | 11    | 12      | 13             | 14               | 15        | 16             | 17             | 18    | 19      | 20             | 21    | 22      |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|-----------|----------------|----------------|-------|---------|----------------|-------|---------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |         |                |       |         |                | Internal threads |           |                |                |       |         |                |       |         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |
|                  |        |      |          |                  |           | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |           |                | min.           | max.  | tol.    | min.           |       |         |
|                  |        |      |          |                  |           |                |       |         |                |       |         |                |                  |           |                |                |       |         |                |       |         |
| 225              |        |      | 3        | 4h               | 0         | 225.000        | 0.236 | 224.764 | 223.051        | 0.160 | 222.891 | 221.043        | 5H               | 0         | 225.000        | 223.316        | 0.265 | 223.051 | 222.152        | 0.400 | 221.752 |
|                  |        |      |          | 6g               | 0.048     | 224.952        | 0.375 | 224.577 | 223.003        | 0.250 | 222.753 | 220.905        | 6H               | 0         | 225.000        | 223.386        | 0.335 | 223.051 | 222.252        | 0.500 | 221.752 |
|                  |        |      |          | 8g               | 0.048     | 224.952        | 0.600 | 224.352 | 223.003        | 0.400 | 222.603 | 220.755        | 7H               | 0         | 225.000        | 223.476        | 0.425 | 223.051 | 222.382        | 0.630 | 221.752 |
|                  |        |      | 4        | 4h               | 0         | 225.000        | 0.300 | 224.700 | 222.402        | 0.180 | 222.222 | 219.758        | 5H               | 0         | 225.000        | 222.702        | 0.300 | 222.402 | 221.145        | 0.475 | 220.670 |
|                  |        |      |          | 6g               | 0.060     | 224.940        | 0.475 | 224.465 | 222.342        | 0.280 | 222.062 | 219.598        | 6H               | 0         | 225.000        | 222.777        | 0.375 | 222.402 | 221.270        | 0.600 | 220.670 |
|                  |        |      |          | 8g               | 0.060     | 224.940        | 0.750 | 224.190 | 222.342        | 0.450 | 221.892 | 219.428        | 7H               | 0         | 225.000        | 222.877        | 0.475 | 222.402 | 221.420        | 0.750 | 220.670 |
|                  |        |      | 6        | 4h               | 0         | 225.000        | 0.375 | 224.625 | 224.103        | 0.200 | 220.903 | 217.207        | 5H               | 0         | 225.000        | 221.438        | 0.335 | 221.103 | 219.135        | 0.630 | 218.505 |
|                  |        |      |          | 6g               | 0.080     | 224.920        | 0.600 | 224.320 | 224.023        | 0.315 | 220.708 | 217.012        | 6H               | 0         | 225.000        | 221.528        | 0.425 | 221.103 | 219.305        | 0.800 | 218.505 |
|                  |        |      |          | 8g               | 0.080     | 224.920        | 0.950 | 223.970 | 224.023        | 0.500 | 220.523 | 216.827        | 7H               | 0         | 225.000        | 221.633        | 0.530 | 221.103 | 219.505        | 1.000 | 218.505 |
| 230              |        |      | 3        | 4h               | 0         | 230.000        | 0.236 | 229.764 | 228.051        | 0.160 | 227.891 | 226.043        | 5H               | 0         | 230.000        | 228.316        | 0.265 | 228.051 | 227.152        | 0.400 | 226.752 |
|                  |        |      |          | 6g               | 0.048     | 229.952        | 0.375 | 229.577 | 228.003        | 0.250 | 227.753 | 225.905        | 6H               | 0         | 230.000        | 228.386        | 0.335 | 228.051 | 227.252        | 0.500 | 226.752 |
|                  |        |      |          | 8g               | 0.048     | 229.952        | 0.600 | 229.352 | 228.003        | 0.400 | 227.603 | 225.755        | 7H               | 0         | 230.000        | 228.476        | 0.425 | 228.051 | 227.382        | 0.630 | 226.752 |
|                  |        |      | 4        | 4h               | 0         | 230.000        | 0.300 | 229.700 | 227.402        | 0.180 | 227.222 | 224.758        | 5H               | 0         | 230.000        | 227.702        | 0.300 | 227.402 | 226.145        | 0.475 | 225.670 |
|                  |        |      |          | 6g               | 0.060     | 229.940        | 0.475 | 229.465 | 227.342        | 0.280 | 227.062 | 224.598        | 6H               | 0         | 230.000        | 227.777        | 0.375 | 227.402 | 226.270        | 0.600 | 225.670 |
|                  |        |      |          | 8g               | 0.060     | 229.940        | 0.750 | 229.190 | 227.342        | 0.450 | 226.892 | 224.428        | 7H               | 0         | 230.000        | 227.877        | 0.475 | 227.402 | 226.420        | 0.750 | 225.670 |
|                  |        |      | 6        | 4h               | 0         | 230.000        | 0.375 | 229.625 | 226.103        | 0.200 | 225.903 | 222.207        | 5H               | 0         | 230.000        | 226.438        | 0.335 | 226.103 | 224.135        | 0.630 | 223.505 |
|                  |        |      |          | 6g               | 0.080     | 229.920        | 0.600 | 229.320 | 226.023        | 0.315 | 225.708 | 222.012        | 6H               | 0         | 230.000        | 226.528        | 0.425 | 226.103 | 224.305        | 0.800 | 223.505 |
|                  |        |      |          | 8g               | 0.080     | 229.920        | 0.950 | 228.970 | 226.023        | 0.500 | 225.523 | 221.827        | 7H               | 0         | 230.000        | 226.633        | 0.530 | 226.103 | 224.505        | 1.000 | 223.505 |
| 235              |        |      | 3        | 4h               | 0         | 235.000        | 0.236 | 234.764 | 233.051        | 0.160 | 232.891 | 231.043        | 5H               | 0         | 235.000        | 233.316        | 0.265 | 233.051 | 232.152        | 0.400 | 231.752 |
|                  |        |      |          | 6g               | 0.048     | 234.952        | 0.375 | 234.577 | 233.003        | 0.250 | 232.753 | 230.905        | 6H               | 0         | 235.000        | 233.386        | 0.335 | 233.051 | 232.252        | 0.500 | 231.752 |
|                  |        |      |          | 8g               | 0.048     | 234.952        | 0.600 | 234.352 | 233.003        | 0.400 | 232.603 | 230.755        | 7H               | 0         | 235.000        | 233.476        | 0.425 | 233.051 | 232.382        | 0.630 | 231.752 |
|                  |        |      | 4        | 4h               | 0         | 235.000        | 0.300 | 234.700 | 232.402        | 0.180 | 232.222 | 229.758        | 5H               | 0         | 235.000        | 232.702        | 0.300 | 232.402 | 231.145        | 0.475 | 230.670 |
|                  |        |      |          | 6g               | 0.060     | 234.940        | 0.475 | 234.465 | 232.342        | 0.280 | 232.062 | 229.598        | 6H               | 0         | 235.000        | 232.777        | 0.375 | 232.402 | 231.270        | 0.600 | 230.670 |
|                  |        |      |          | 8g               | 0.060     | 234.940        | 0.750 | 234.190 | 232.342        | 0.450 | 231.892 | 229.428        | 7H               | 0         | 235.000        | 232.877        | 0.475 | 232.402 | 231.420        | 0.750 | 230.670 |
|                  |        |      | 6        | 4h               | 0         | 235.000        | 0.375 | 234.625 | 231.103        | 0.200 | 230.903 | 227.207        | 5H               | 0         | 235.000        | 231.438        | 0.335 | 231.103 | 229.135        | 0.630 | 228.505 |
|                  |        |      |          | 6g               | 0.080     | 234.920        | 0.600 | 234.320 | 231.023        | 0.315 | 230.708 | 227.012        | 6H               | 0         | 235.000        | 231.528        | 0.425 | 231.103 | 229.305        | 0.800 | 228.505 |
|                  |        |      |          | 8g               | 0.080     | 234.920        | 0.950 | 233.970 | 231.023        | 0.500 | 230.523 | 226.827        | 7H               | 0         | 235.000        | 231.633        | 0.530 | 231.103 | 229.505        | 1.000 | 228.505 |



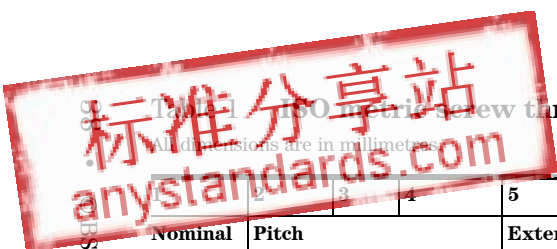
BSI 2007

ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9       | 10             | 11    | 12      | 13             | 14               | 15        | 16             | 17             | 18    | 19      | 20             | 21    | 22      |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|-----------|----------------|----------------|-------|---------|----------------|-------|---------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |         |                |       |         |                | Internal threads |           |                |                |       |         |                |       |         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |
|                  |        |      |          |                  |           | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |           |                | min.           | max.  | tol.    | min.           | max.  | tol.    |
| 240              |        |      | 3        | 4h               | 0         | 240.000        | 0.236 | 239.764 | 238.051        | 0.160 | 237.891 | 236.043        | 5H               | 0         | 240.000        | 238.316        | 0.265 | 238.051 | 237.152        | 0.400 | 236.752 |
|                  |        |      |          | 6g               | 0.048     | 239.952        | 0.375 | 239.577 | 238.003        | 0.250 | 237.753 | 235.905        | 6H               | 0         | 240.000        | 238.386        | 0.335 | 238.051 | 237.252        | 0.500 | 236.752 |
|                  |        |      |          | 8g               | 0.048     | 239.952        | 0.600 | 239.352 | 238.003        | 0.400 | 237.603 | 235.755        | 7H               | 0         | 240.000        | 238.476        | 0.425 | 238.051 | 237.382        | 0.630 | 236.752 |
|                  |        |      | 4        | 4h               | 0         | 240.000        | 0.300 | 239.700 | 237.402        | 0.180 | 237.222 | 234.758        | 5H               | 0         | 240.000        | 237.702        | 0.300 | 237.402 | 236.145        | 0.475 | 235.670 |
|                  |        |      |          | 6g               | 0.060     | 239.940        | 0.475 | 239.465 | 237.342        | 0.280 | 237.062 | 234.598        | 6H               | 0         | 240.000        | 237.777        | 0.375 | 237.402 | 236.270        | 0.600 | 235.670 |
|                  |        |      |          | 8g               | 0.060     | 239.940        | 0.750 | 239.190 | 237.342        | 0.450 | 236.892 | 234.428        | 7H               | 0         | 240.000        | 237.877        | 0.475 | 237.402 | 236.420        | 0.750 | 235.670 |
|                  |        |      | 6        | 4h               | 0         | 240.000        | 0.375 | 239.625 | 236.103        | 0.200 | 235.903 | 232.207        | 5H               | 0         | 240.000        | 236.438        | 0.335 | 236.103 | 234.135        | 0.630 | 233.505 |
|                  |        |      |          | 6g               | 0.080     | 239.920        | 0.600 | 239.320 | 236.023        | 0.315 | 235.708 | 232.012        | 6H               | 0         | 240.000        | 236.528        | 0.425 | 236.103 | 234.305        | 0.800 | 233.505 |
|                  |        |      |          | 8g               | 0.080     | 239.920        | 0.950 | 238.970 | 236.023        | 0.500 | 235.523 | 231.827        | 7H               | 0         | 240.000        | 236.633        | 0.530 | 236.103 | 234.505        | 1.000 | 233.505 |
| 245              |        |      | 3        | 4h               | 0         | 245.000        | 0.236 | 244.764 | 243.051        | 0.160 | 242.891 | 241.043        | 5H               | 0         | 245.000        | 243.316        | 0.265 | 243.051 | 242.152        | 0.400 | 241.752 |
|                  |        |      |          | 6g               | 0.048     | 244.952        | 0.375 | 244.577 | 243.003        | 0.250 | 242.753 | 240.905        | 6H               | 0         | 245.000        | 243.386        | 0.335 | 243.051 | 242.252        | 0.500 | 241.752 |
|                  |        |      |          | 8g               | 0.048     | 244.952        | 0.600 | 244.352 | 243.003        | 0.400 | 242.603 | 240.755        | 7H               | 0         | 245.000        | 243.476        | 0.425 | 243.051 | 242.382        | 0.630 | 241.752 |
|                  |        |      | 4        | 4h               | 0         | 245.000        | 0.300 | 244.700 | 242.402        | 0.180 | 242.222 | 239.758        | 5H               | 0         | 245.000        | 242.702        | 0.300 | 242.402 | 241.145        | 0.475 | 240.670 |
|                  |        |      |          | 6g               | 0.060     | 244.940        | 0.475 | 244.465 | 242.342        | 0.280 | 242.062 | 239.598        | 6H               | 0         | 245.000        | 242.777        | 0.375 | 242.402 | 241.270        | 0.600 | 240.670 |
|                  |        |      |          | 8g               | 0.060     | 244.940        | 0.750 | 244.190 | 242.342        | 0.450 | 241.892 | 239.428        | 7H               | 0         | 245.000        | 242.877        | 0.475 | 242.402 | 241.420        | 0.750 | 240.670 |
|                  |        |      | 6        | 4h               | 0         | 245.000        | 0.375 | 244.625 | 241.103        | 0.200 | 240.903 | 237.207        | 5H               | 0         | 245.000        | 241.438        | 0.335 | 241.103 | 239.135        | 0.630 | 238.505 |
|                  |        |      |          | 6g               | 0.080     | 244.920        | 0.600 | 244.320 | 241.023        | 0.315 | 240.708 | 237.012        | 6H               | 0         | 245.000        | 241.528        | 0.425 | 241.103 | 239.305        | 0.800 | 238.505 |
|                  |        |      |          | 8g               | 0.080     | 244.920        | 0.950 | 243.970 | 241.023        | 0.500 | 240.523 | 236.827        | 7H               | 0         | 245.000        | 241.633        | 0.530 | 241.103 | 239.505        | 1.000 | 238.505 |
| 250              |        |      | 3        | 4h               | 0         | 250.000        | 0.236 | 249.764 | 248.051        | 0.160 | 247.891 | 246.043        | 5H               | 0         | 250.000        | 248.316        | 0.265 | 248.051 | 247.152        | 0.400 | 246.752 |
|                  |        |      |          | 6g               | 0.048     | 249.952        | 0.375 | 249.577 | 248.003        | 0.250 | 247.753 | 245.905        | 6H               | 0         | 250.000        | 248.386        | 0.335 | 248.051 | 247.252        | 0.500 | 246.752 |
|                  |        |      |          | 8g               | 0.048     | 249.952        | 0.600 | 249.352 | 248.003        | 0.400 | 247.603 | 245.755        | 7H               | 0         | 250.000        | 248.476        | 0.425 | 248.051 | 247.382        | 0.630 | 246.752 |
|                  |        |      | 4        | 4h               | 0         | 250.000        | 0.300 | 249.700 | 247.402        | 0.180 | 247.222 | 244.758        | 5H               | 0         | 250.000        | 247.702        | 0.300 | 247.402 | 246.145        | 0.475 | 245.670 |
|                  |        |      |          | 6g               | 0.060     | 249.940        | 0.475 | 249.465 | 247.342        | 0.280 | 247.062 | 244.598        | 6H               | 0         | 250.000        | 247.777        | 0.375 | 247.402 | 246.270        | 0.600 | 245.670 |
|                  |        |      |          | 8g               | 0.060     | 249.940        | 0.750 | 249.190 | 247.342        | 0.450 | 247.892 | 244.428        | 7H               | 0         | 250.000        | 247.877        | 0.475 | 247.402 | 246.420        | 0.750 | 245.670 |
|                  |        |      | 6        | 4h               | 0         | 250.000        | 0.375 | 249.625 | 246.103        | 0.200 | 245.903 | 242.207        | 5H               | 0         | 250.000        | 246.438        | 0.335 | 246.103 | 244.135        | 0.630 | 243.505 |
|                  |        |      |          | 6g               | 0.080     | 249.920        | 0.600 | 249.320 | 246.023        | 0.315 | 245.708 | 242.012        | 6H               | 0         | 250.000        | 246.528        | 0.425 | 246.103 | 244.305        | 0.800 | 243.505 |
|                  |        |      |          | 8g               | 0.080     | 249.920        | 0.950 | 248.970 | 246.023        | 0.500 | 245.523 | 241.827        | 7H               | 0         | 250.000        | 246.633        | 0.530 | 246.103 | 244.505        | 1.000 | 243.505 |

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (*continued*)

|                  | 2      | 3    | 4        | 5                | 6          | 7              | 8     | 9       | 10             | 11    | 12      | 13             | 14               | 15         | 16             | 17             | 18    | 19      | 20             | 21    | 22      |
|------------------|--------|------|----------|------------------|------------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|------------|----------------|----------------|-------|---------|----------------|-------|---------|
| Nominal diameter | Pitch  |      |          | External threads |            |                |       |         |                |       |         |                | Internal threads |            |                |                |       |         |                |       |         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund. dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund. dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |
|                  |        |      |          |                  |            | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |            | min.           | max.           | tol.  | min.    | max.           | tol.  | min.    |
| 255              |        |      | 4        | 4h               | 0          | 255.000        | 0.300 | 254.700 | 252.402        | 0.180 | 252.222 | 249.758        | 5H               | 0          | 255.000        | 252.702        | 0.300 | 252.402 | 251.145        | 0.475 | 250.670 |
|                  |        |      |          | 6g               | 0.060      | 254.940        | 0.475 | 254.465 | 252.342        | 0.280 | 252.062 | 249.598        | 6H               | 0          | 255.000        | 252.777        | 0.375 | 252.402 | 251.270        | 0.600 | 250.670 |
|                  |        |      |          | 8g               | 0.060      | 254.940        | 0.750 | 254.190 | 252.342        | 0.450 | 251.892 | 249.428        | 7H               | 0          | 255.000        | 252.877        | 0.475 | 252.402 | 251.420        | 0.750 | 250.670 |
|                  |        |      | 6        | 4h               | 0          | 255.000        | 0.375 | 254.625 | 251.103        | 0.200 | 250.903 | 247.207        | 5H               | 0          | 255.000        | 251.438        | 0.335 | 251.103 | 249.135        | 0.630 | 248.505 |
|                  |        |      |          | 6g               | 0.080      | 254.920        | 0.600 | 254.320 | 251.023        | 0.315 | 250.708 | 247.012        | 6H               | 0          | 255.000        | 251.528        | 0.425 | 251.103 | 249.305        | 0.800 | 248.505 |
|                  |        |      |          | 8g               | 0.080      | 254.920        | 0.950 | 253.970 | 251.023        | 0.500 | 250.523 | 246.827        | 7H               | 0          | 255.000        | 251.633        | 0.530 | 251.103 | 249.505        | 1.000 | 248.505 |
| 260              |        |      | 4        | 4h               | 0          | 260.000        | 0.300 | 259.700 | 257.402        | 0.180 | 257.222 | 254.758        | 5H               | 0          | 260.000        | 257.702        | 0.300 | 257.402 | 256.145        | 0.475 | 255.670 |
|                  |        |      |          | 6g               | 0.060      | 259.940        | 0.475 | 259.465 | 257.342        | 0.280 | 257.062 | 254.598        | 6H               | 0          | 260.000        | 257.777        | 0.375 | 257.402 | 256.270        | 0.600 | 255.670 |
|                  |        |      |          | 8g               | 0.060      | 259.940        | 0.750 | 259.190 | 257.342        | 0.450 | 256.892 | 254.428        | 7H               | 0          | 260.000        | 257.877        | 0.475 | 257.402 | 256.420        | 0.750 | 255.670 |
|                  |        |      | 6        | 4h               | 0          | 260.000        | 0.375 | 259.625 | 256.103        | 0.200 | 255.903 | 252.207        | 5H               | 0          | 260.000        | 256.438        | 0.335 | 256.103 | 254.135        | 0.630 | 253.505 |
|                  |        |      |          | 6g               | 0.080      | 259.920        | 0.600 | 259.320 | 256.023        | 0.315 | 255.708 | 252.012        | 6H               | 0          | 260.000        | 256.528        | 0.425 | 256.103 | 254.305        | 0.800 | 253.505 |
|                  |        |      |          | 8g               | 0.080      | 259.920        | 0.950 | 258.970 | 256.023        | 0.500 | 255.523 | 251.827        | 7H               | 0          | 260.000        | 256.633        | 0.530 | 256.103 | 254.505        | 1.000 | 253.505 |
| 265              |        |      | 4        | 4h               | 0          | 265.000        | 0.300 | 264.700 | 262.402        | 0.180 | 262.222 | 259.758        | 5H               | 0          | 265.000        | 262.702        | 0.300 | 262.402 | 261.145        | 0.475 | 260.670 |
|                  |        |      |          | 6g               | 0.060      | 264.940        | 0.475 | 264.465 | 262.342        | 0.280 | 262.062 | 259.598        | 6H               | 0          | 265.000        | 262.777        | 0.375 | 262.402 | 261.270        | 0.600 | 260.670 |
|                  |        |      |          | 8g               | 0.060      | 264.940        | 0.750 | 264.190 | 262.342        | 0.450 | 261.892 | 259.428        | 7H               | 0          | 265.000        | 262.877        | 0.475 | 262.402 | 261.420        | 0.750 | 260.670 |
|                  |        |      | 6        | 4h               | 0          | 265.000        | 0.375 | 264.625 | 261.103        | 0.200 | 260.903 | 257.207        | 5H               | 0          | 265.000        | 261.438        | 0.335 | 261.103 | 259.135        | 0.630 | 258.505 |
|                  |        |      |          | 6g               | 0.080      | 264.920        | 0.600 | 264.320 | 261.023        | 0.315 | 260.708 | 257.012        | 6H               | 0          | 265.000        | 261.528        | 0.425 | 261.103 | 259.305        | 0.800 | 258.505 |
|                  |        |      |          | 8g               | 0.080      | 264.920        | 0.950 | 263.970 | 261.023        | 0.500 | 260.523 | 256.827        | 7H               | 0          | 265.000        | 261.633        | 0.530 | 261.103 | 259.505        | 1.000 | 258.505 |
| 270              |        |      | 4        | 4h               | 0          | 270.000        | 0.300 | 269.700 | 267.402        | 0.180 | 267.222 | 264.758        | 5H               | 0          | 270.000        | 267.702        | 0.300 | 267.402 | 266.145        | 0.475 | 265.670 |
|                  |        |      |          | 6g               | 0.060      | 269.940        | 0.475 | 269.465 | 267.342        | 0.280 | 267.062 | 264.598        | 6H               | 0          | 270.000        | 267.777        | 0.375 | 267.402 | 266.270        | 0.600 | 265.670 |
|                  |        |      |          | 8g               | 0.060      | 269.940        | 0.750 | 269.190 | 267.342        | 0.450 | 266.892 | 264.428        | 7H               | 0          | 270.000        | 267.877        | 0.475 | 267.402 | 266.420        | 0.750 | 265.670 |
|                  |        |      | 6        | 4h               | 0          | 270.000        | 0.375 | 269.625 | 266.103        | 0.200 | 265.903 | 262.207        | 5H               | 0          | 270.000        | 266.438        | 0.335 | 266.103 | 264.135        | 0.630 | 263.505 |
|                  |        |      |          | 6g               | 0.080      | 269.920        | 0.600 | 269.320 | 266.023        | 0.315 | 265.708 | 262.012        | 6H               | 0          | 270.000        | 266.528        | 0.425 | 266.103 | 264.305        | 0.800 | 263.505 |
|                  |        |      |          | 8g               | 0.080      | 269.920        | 0.950 | 268.970 | 266.023        | 0.500 | 265.523 | 261.827        | 7H               | 0          | 270.000        | 266.633        | 0.530 | 266.103 | 264.505        | 1.000 | 263.505 |
| 275              |        |      | 4        | 4h               | 0          | 275.000        | 0.300 | 274.700 | 272.402        | 0.180 | 272.222 | 269.758        | 5H               | 0          | 275.000        | 272.702        | 0.300 | 272.402 | 271.145        | 0.475 | 270.670 |
|                  |        |      |          | 6g               | 0.060      | 274.940        | 0.475 | 274.465 | 272.342        | 0.280 | 272.062 | 269.598        | 6H               | 0          | 275.000        | 272.777        | 0.375 | 272.402 | 271.270        | 0.600 | 270.670 |
|                  |        |      |          | 8g               | 0.060      | 274.940        | 0.750 | 274.190 | 272.342        | 0.450 | 271.892 | 269.428        | 7H               | 0          | 275.000        | 272.877        | 0.475 | 272.402 | 271.420        | 0.750 | 270.670 |
|                  |        |      | 6        | 4h               | 0          | 275.000        | 0.375 | 274.625 | 271.103        | 0.200 | 270.903 | 267.207        | 5H               | 0          | 275.000        | 271.438        | 0.335 | 271.103 | 269.135        | 0.630 | 268.505 |
|                  |        |      |          | 6g               | 0.080      | 274.920        | 0.600 | 274.320 | 271.023        | 0.315 | 270.708 | 267.012        | 6H               | 0          | 275.000        | 271.528        | 0.425 | 271.103 | 269.305        | 0.800 | 268.505 |
|                  |        |      |          | 8g               | 0.080      | 274.920        | 0.950 | 273.970 | 271.023        | 0.500 | 270.523 | 266.827        | 7H               | 0          | 275.000        | 271.633        | 0.530 | 271.103 | 269.505        | 1.000 | 268.505 |



BSI 2007

Table 1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement (continued)

|                  | 2      | 3    | 4        | 5                | 6         | 7              | 8     | 9       | 10             | 11    | 12      | 13             | 14               | 15        | 16             | 17             | 18    | 19      | 20             | 21    | 22      |
|------------------|--------|------|----------|------------------|-----------|----------------|-------|---------|----------------|-------|---------|----------------|------------------|-----------|----------------|----------------|-------|---------|----------------|-------|---------|
| Nominal diameter | Pitch  |      |          | External threads |           |                |       |         |                |       |         |                | Internal threads |           |                |                |       |         |                |       |         |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev. | Major diameter |       |         | Pitch diameter |       |         | Minor diameter | Tolerance class  | Fund dev. | Major diameter | Pitch diameter |       |         | Minor diameter |       |         |
|                  |        |      |          |                  |           | max.           | tol.  | min.    | max.           | tol.  | min.    |                |                  |           |                | min.           | max.  | tol.    | min.           | max.  | tol.    |
| 280              |        |      | 4        | 4h               | 0         | 280.000        | 0.300 | 279.700 | 277.402        | 0.180 | 277.222 | 274.758        | 5H               | 0         | 280.000        | 277.702        | 0.300 | 277.402 | 276.145        | 0.475 | 275.670 |
|                  |        |      |          | 6g               | 0.060     | 279.940        | 0.475 | 279.465 | 277.342        | 0.280 | 277.062 | 274.598        | 6H               | 0         | 280.000        | 277.777        | 0.375 | 277.402 | 276.270        | 0.600 | 275.670 |
|                  |        |      |          | 8g               | 0.060     | 279.940        | 0.750 | 279.190 | 277.342        | 0.450 | 276.892 | 274.428        | 7H               | 0         | 280.000        | 277.877        | 0.475 | 277.402 | 276.420        | 0.750 | 275.670 |
|                  |        |      | 6        | 4h               | 0         | 280.000        | 0.375 | 279.625 | 276.103        | 0.200 | 275.903 | 272.207        | 5H               | 0         | 280.000        | 276.438        | 0.335 | 276.103 | 274.135        | 0.630 | 273.505 |
|                  |        |      |          | 6g               | 0.080     | 279.920        | 0.600 | 279.320 | 276.023        | 0.315 | 275.708 | 272.012        | 6H               | 0         | 280.000        | 276.528        | 0.425 | 276.103 | 274.305        | 0.800 | 273.505 |
|                  |        |      |          | 8g               | 0.080     | 279.920        | 0.950 | 278.970 | 276.023        | 0.500 | 275.523 | 271.827        | 7H               | 0         | 280.000        | 276.633        | 0.530 | 276.103 | 274.505        | 1.000 | 273.505 |
| 285              |        |      | 4        | 4h               | 0         | 285.000        | 0.300 | 284.700 | 282.402        | 0.180 | 282.222 | 279.758        | 5H               | 0         | 285.000        | 282.702        | 0.300 | 282.402 | 281.145        | 0.475 | 280.670 |
|                  |        |      |          | 6g               | 0.060     | 284.940        | 0.475 | 284.465 | 282.342        | 0.280 | 282.062 | 279.598        | 6H               | 0         | 285.000        | 282.777        | 0.375 | 282.402 | 281.270        | 0.600 | 280.670 |
|                  |        |      |          | 8g               | 0.060     | 284.940        | 0.750 | 284.190 | 282.342        | 0.450 | 281.892 | 279.428        | 7H               | 0         | 285.000        | 282.877        | 0.475 | 282.402 | 281.420        | 0.750 | 280.670 |
|                  |        |      | 6        | 4h               | 0         | 285.000        | 0.375 | 284.625 | 281.103        | 0.200 | 280.903 | 277.207        | 5H               | 0         | 285.000        | 281.438        | 0.335 | 281.103 | 279.135        | 0.630 | 278.505 |
|                  |        |      |          | 6g               | 0.080     | 284.920        | 0.600 | 284.320 | 281.023        | 0.315 | 280.708 | 277.012        | 6H               | 0         | 285.000        | 281.528        | 0.425 | 281.103 | 279.305        | 0.800 | 278.505 |
|                  |        |      |          | 8g               | 0.080     | 284.920        | 0.950 | 283.970 | 281.023        | 0.500 | 280.523 | 276.827        | 7H               | 0         | 285.000        | 281.633        | 0.530 | 281.103 | 279.505        | 1.000 | 278.505 |
| 290              |        |      | 4        | 4h               | 0         | 290.000        | 0.300 | 289.700 | 287.402        | 0.180 | 287.222 | 284.758        | 5H               | 0         | 290.000        | 287.702        | 0.300 | 287.402 | 286.145        | 0.475 | 285.670 |
|                  |        |      |          | 6g               | 0.060     | 289.940        | 0.475 | 289.465 | 287.342        | 0.280 | 287.062 | 284.598        | 6H               | 0         | 290.000        | 287.777        | 0.375 | 287.402 | 286.270        | 0.600 | 285.670 |
|                  |        |      |          | 8g               | 0.060     | 289.940        | 0.750 | 289.190 | 287.342        | 0.450 | 286.892 | 284.428        | 7H               | 0         | 290.000        | 287.877        | 0.475 | 287.402 | 286.420        | 0.750 | 285.670 |
|                  |        |      | 6        | 4h               | 0         | 290.000        | 0.375 | 289.625 | 286.103        | 0.200 | 285.903 | 282.207        | 5H               | 0         | 290.000        | 286.438        | 0.335 | 286.103 | 284.135        | 0.630 | 283.505 |
|                  |        |      |          | 6g               | 0.080     | 289.920        | 0.600 | 289.320 | 286.023        | 0.315 | 285.708 | 282.012        | 6H               | 0         | 290.000        | 286.528        | 0.425 | 286.103 | 284.305        | 0.800 | 283.505 |
|                  |        |      |          | 8g               | 0.080     | 289.920        | 0.950 | 288.970 | 286.023        | 0.500 | 285.523 | 281.827        | 7H               | 0         | 290.000        | 286.633        | 0.530 | 286.103 | 284.505        | 1.000 | 283.505 |
| 295              |        |      | 4        | 4h               | 0         | 295.000        | 0.300 | 294.700 | 292.402        | 0.180 | 292.222 | 289.758        | 5H               | 0         | 295.000        | 292.702        | 0.300 | 292.402 | 291.145        | 0.475 | 290.670 |
|                  |        |      |          | 6g               | 0.060     | 294.940        | 0.475 | 294.465 | 292.342        | 0.280 | 292.062 | 289.598        | 6H               | 0         | 295.000        | 292.777        | 0.375 | 292.402 | 291.270        | 0.600 | 290.670 |
|                  |        |      |          | 8g               | 0.060     | 294.940        | 0.750 | 294.190 | 292.342        | 0.450 | 291.892 | 289.428        | 7H               | 0         | 295.000        | 292.877        | 0.475 | 292.402 | 291.420        | 0.750 | 290.670 |
|                  |        |      | 6        | 4h               | 0         | 295.000        | 0.375 | 294.625 | 291.103        | 0.200 | 290.903 | 287.207        | 5H               | 0         | 295.000        | 291.438        | 0.335 | 291.103 | 289.135        | 0.630 | 288.505 |
|                  |        |      |          | 6g               | 0.080     | 294.920        | 0.600 | 294.320 | 291.023        | 0.315 | 290.708 | 287.012        | 6H               | 0         | 295.000        | 291.528        | 0.425 | 291.103 | 289.305        | 0.800 | 288.505 |
|                  |        |      |          | 8g               | 0.080     | 294.920        | 0.950 | 293.970 | 291.023        | 0.500 | 290.523 | 286.827        | 7H               | 0         | 295.000        | 291.633        | 0.530 | 291.103 | 289.505        | 1.000 | 288.505 |
| 300              |        |      | 4        | 4h               | 0         | 300.000        | 0.300 | 299.700 | 297.402        | 0.180 | 297.222 | 294.758        | 5H               | 0         | 300.000        | 297.702        | 0.300 | 297.402 | 296.145        | 0.475 | 295.670 |
|                  |        |      |          | 6g               | 0.060     | 299.940        | 0.475 | 299.465 | 297.342        | 0.280 | 297.062 | 294.598        | 6H               | 0         | 300.000        | 297.777        | 0.375 | 297.402 | 296.270        | 0.600 | 295.670 |
|                  |        |      |          | 8g               | 0.060     | 299.940        | 0.750 | 299.190 | 297.342        | 0.450 | 296.892 | 294.428        | 7H               | 0         | 300.000        | 297.877        | 0.475 | 297.402 | 296.420        | 0.750 | 295.670 |
|                  |        |      | 6        | 4h               | 0         | 300.000        | 0.375 | 299.625 | 296.103        | 0.200 | 295.903 | 292.207        | 5H               | 0         | 300.000        | 296.438        | 0.335 | 296.103 | 294.135        | 0.630 | 293.505 |
|                  |        |      |          | 6g               | 0.080     | 299.920        | 0.600 | 299.320 | 296.023        | 0.315 | 295.708 | 292.012        | 6H               | 0         | 300.000        | 296.528        | 0.425 | 296.103 | 294.305        | 0.800 | 293.505 |
|                  |        |      |          | 8g               | 0.080     | 299.920        | 0.950 | 298.970 | 296.023        | 0.500 | 295.523 | 291.827        | 7H               | 0         | 300.000        | 296.633        | 0.530 | 296.103 | 294.505        | 1.000 | 293.505 |

Annex A (normative)

## Fundamental deviations, tolerances and limits of size for additional tolerance classes for aerospace use

The fundamental deviations, tolerances and limits of size for tolerance classes 4H, 6h and 4g shall be as specified in Table A.1.

*NOTE 1 These are primarily for aerospace use.*

*NOTE 2 For the minor diameter of external threads Table A.1 specifies the minimum dimensions only. The maximum dimensions have not been specified because of the requirement in BS 3643-1:2007, 7.9 that these dimensions are to be controlled by the GO gauge.*



BSI 2007

Table A.1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement for  
any space use  
All dimensions are in millimetres.

| 1                | 2      | 3    | 4        | 5                | 6          | 7                | 8              | 9                | 10               | 11             | 12               | 13             | 14               | 15          | 16             | 17             | 18    | 19     | 20             | 21    | 22     |      |
|------------------|--------|------|----------|------------------|------------|------------------|----------------|------------------|------------------|----------------|------------------|----------------|------------------|-------------|----------------|----------------|-------|--------|----------------|-------|--------|------|
| Nominal diameter | Pitch  |      |          | External threads |            |                  |                |                  |                  |                |                  |                | Internal threads |             |                |                |       |        |                |       |        |      |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund dev.  | Major diameter   |                |                  | Pitch diameter   |                |                  | Minor diameter | Tolerance class  | Fund dev.   | Major diameter | Pitch diameter |       |        | Minor diameter |       |        |      |
|                  |        |      |          |                  |            | max.             | tol.           | min.             | max.             | tol.           | min.             |                |                  |             |                | min.           | max.  | tol.   | min.           | max.  | tol.   | min. |
| 1.6              | 0.35   |      |          | 6h<br>4g         | 0<br>0.019 | 1.600<br>1.581   | 0.085<br>0.053 | 1.515<br>1.528   | 1.373<br>1.354   | 0.063<br>0.040 | 1.310<br>1.314   | 1.094<br>1.098 | 4H               | See Table 1 |                |                |       |        |                |       |        |      |
| 2                | 0.4    |      |          | 6h<br>4g         | 0<br>0.019 | 2.000<br>1.981   | 0.095<br>0.060 | 1.905<br>1.921   | 1.740<br>1.721   | 0.067<br>0.042 | 1.673<br>1.679   | 1.427<br>1.433 | 4H               |             |                |                |       |        |                |       |        |      |
| 2.5              | 0.45   |      |          | 6h<br>4g         | 0<br>0.020 | 2.500<br>2.480   | 0.100<br>0.063 | 2.400<br>2.417   | 2.208<br>2.188   | 0.071<br>0.045 | 2.137<br>2.143   | 1.859<br>1.865 | 4H               |             |                |                |       |        |                |       |        |      |
| 3                | 0.5    |      |          | 6h<br>4g         | 0<br>0.020 | 3.000<br>2.980   | 0.106<br>0.067 | 2.894<br>2.913   | 2.675<br>2.655   | 0.075<br>0.048 | 2.600<br>2.607   | 2.292<br>2.299 | 4H               | 0           | 3.000          | 2.738          | 0.063 | 2.675  | 2.549          | 0.090 | 2.459  |      |
| 4                | 0.7    |      |          | 6h<br>4g         | 0<br>0.022 | 4.000<br>3.978   | 0.140<br>0.090 | 3.860<br>3.888   | 3.545<br>3.523   | 0.090<br>0.056 | 3.455<br>3.467   | 3.024<br>3.036 | 4H               | 0           | 4.000          | 3.620          | 0.075 | 3.545  | 3.354          | 0.112 | 3.242  |      |
| 5                | 0.8    |      |          | 6h<br>4g         | 0<br>0.024 | 5.000<br>4.976   | 0.150<br>0.095 | 4.850<br>4.881   | 4.480<br>4.456   | 0.095<br>0.060 | 4.385<br>4.396   | 3.892<br>3.903 | 4H               | 0           | 5.000          | 4.560          | 0.080 | 4.480  | 4.259          | 0.125 | 4.134  |      |
| 6                | 1      |      |          | 6h<br>4g         | 0<br>0.026 | 6.000<br>5.974   | 0.180<br>0.112 | 5.820<br>5.863   | 5.350<br>5.324   | 0.112<br>0.071 | 5.238<br>5.253   | 4.622<br>4.637 | 4H               | 0           | 6.000          | 5.445          | 0.095 | 5.350  | 5.067          | 0.150 | 4.917  |      |
| 8                | 1.25   |      |          | 6h<br>4g         | 0<br>0.028 | 8.000<br>7.972   | 0.212<br>0.132 | 7.788<br>7.840   | 7.188<br>7.160   | 0.118<br>0.075 | 7.070<br>7.085   | 6.300<br>6.315 | 4H               | 0           | 8.000          | 7.288          | 0.100 | 7.188  | 6.817          | 0.170 | 6.647  |      |
| 10               | 1.5    |      |          | 6h<br>4g         | 0<br>0.032 | 10.000<br>9.968  | 0.236<br>0.150 | 9.764<br>9.818   | 9.026<br>8.994   | 0.132<br>0.085 | 8.894<br>8.909   | 7.970<br>7.985 | 4H               | 0           | 10.00          | 9.138          | 0.112 | 9.026  | 8.566          | 0.190 | 8.376  |      |
| 12               |        |      | 1.5      | 6h<br>4g         | 0<br>0.032 | 12.000<br>11.968 | 0.236<br>0.150 | 11.764<br>11.818 | 11.026<br>10.994 | 0.140<br>0.090 | 10.886<br>10.904 | 9.962<br>9.980 | 4H               | 0           | 12.000         | 11.144         | 0.118 | 11.026 | 10.566         | 0.190 | 10.376 |      |

Table A.1 ISO metric screw threads – Limits and tolerances for finished uncoated threads for normal length of engagement for aerospace use (continued)

All dimensions are in millimetres.

| 1                | 2      | 3    | 4        | 5                | 6          | 7                | 8              | 9                | 10               | 11             | 12               | 13               | 14               | 15         | 16             | 17             | 18   | 19   | 20             | 21   | 22   |
|------------------|--------|------|----------|------------------|------------|------------------|----------------|------------------|------------------|----------------|------------------|------------------|------------------|------------|----------------|----------------|------|------|----------------|------|------|
| Nominal diameter | Pitch  |      |          | External threads |            |                  |                |                  |                  |                |                  |                  | Internal threads |            |                |                |      |      |                |      |      |
|                  | Coarse | Fine | Constant | Tolerance class  | Fund. dev. | Major diameter   |                |                  | Pitch diameter   |                |                  | Minor diameter   | Tolerance class  | Fund. dev. | Major diameter | Pitch diameter |      |      | Minor diameter |      |      |
|                  |        |      |          |                  |            | max.             | tol.           | min.             | max.             | tol.           | min.             |                  |                  |            |                | max.           | tol. | min. | max.           | tol. | min. |
| 14               |        | 1.5  |          | 6h<br>4g         | 0<br>0.032 | 14.000<br>13.968 | 0.236<br>0.150 | 13.764<br>13.818 | 13.026<br>12.994 | 0.140<br>0.090 | 12.886<br>12.904 | 11.962<br>11.980 |                  |            |                |                |      |      |                |      |      |
| 16               |        | 1.5  |          | 6h<br>4g         | 0<br>0.032 | 16.000<br>15.968 | 0.236<br>0.150 | 15.764<br>15.818 | 15.026<br>14.994 | 0.140<br>0.090 | 14.886<br>14.904 | 13.962<br>13.980 |                  |            |                |                |      |      |                |      |      |
| 18               |        | 1.5  |          | 6h<br>4g         | 0<br>0.032 | 18.000<br>17.968 | 0.236<br>0.150 | 17.764<br>17.818 | 17.026<br>16.994 | 0.140<br>0.090 | 16.886<br>16.904 | 15.962<br>15.980 |                  |            |                |                |      |      |                |      |      |
| 20               |        | 1.5  |          | 6h<br>4g         | 0<br>0.032 | 20.000<br>19.968 | 0.236<br>0.150 | 19.764<br>19.818 | 19.026<br>18.994 | 0.140<br>0.090 | 18.886<br>18.904 | 17.962<br>17.980 |                  |            |                |                |      |      |                |      |      |
| 22               |        | 1.5  |          | 6h<br>4g         | 0<br>0.032 | 22.000<br>21.968 | 0.236<br>0.150 | 21.764<br>21.818 | 21.026<br>20.994 | 0.140<br>0.090 | 20.886<br>20.904 | 19.962<br>19.980 |                  |            |                |                |      |      |                |      |      |
| 24               |        | 2    |          | 6h<br>4g         | 0<br>0.038 | 24.000<br>23.962 | 0.280<br>0.180 | 23.720<br>23.782 | 22.701<br>22.663 | 0.170<br>0.106 | 22.531<br>22.557 | 21.299<br>21.325 |                  |            |                |                |      |      |                |      |      |
| 27               |        | 2    |          | 6h<br>4g         | 0<br>0.038 | 27.000<br>26.962 | 0.280<br>0.180 | 26.720<br>26.782 | 25.701<br>25.663 | 0.170<br>0.106 | 25.531<br>25.557 | 24.299<br>24.325 |                  |            |                |                |      |      |                |      |      |
| 30               |        | 2    |          | 6h<br>4g         | 0<br>0.038 | 30.000<br>29.962 | 0.280<br>0.180 | 29.720<br>29.782 | 28.701<br>28.663 | 0.170<br>0.106 | 28.531<br>28.557 | 27.299<br>27.325 |                  |            |                |                |      |      |                |      |      |
| 33               |        | 2    |          | 6h<br>4g         | 0<br>0.038 | 33.000<br>32.962 | 0.280<br>0.180 | 32.720<br>32.782 | 31.701<br>31.663 | 0.170<br>0.106 | 31.531<br>31.557 | 30.299<br>30.325 |                  |            |                |                |      |      |                |      |      |
| 36               |        |      | 2        | 6h<br>4g         | 0<br>0.038 | 36.000<br>35.962 | 0.280<br>0.180 | 35.720<br>35.782 | 34.701<br>34.663 | 0.170<br>0.106 | 34.531<br>34.557 | 33.299<br>33.325 |                  |            |                |                |      |      |                |      |      |
| 39               |        |      | 2        | 6h<br>4g         | 0<br>0.038 | 39.000<br>38.962 | 0.280<br>0.180 | 38.720<br>38.782 | 37.701<br>37.663 | 0.170<br>0.106 | 37.531<br>37.557 | 36.299<br>36.325 |                  |            |                |                |      |      |                |      |      |

# Bibliography

## Standards publications

For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

PD 6494, *Mismatch of screw thread systems*



# BSI – British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

## Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover.

Tel: +44 (0)20 8996 9000. Fax: +44 (0)20 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

## Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: +44 (0)20 8996 9001.

Fax: +44 (0)20 8996 7001. Email: [orders@bsi-global.com](mailto:orders@bsi-global.com). Standards are also available from the BSI website at <http://www.bsi-global.com>.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

## Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre. Tel: +44 (0)20 8996 7111. Fax: +44 (0)20 8996 7048. Email: [info@bsi-global.com](mailto:info@bsi-global.com).

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration. Tel: +44 (0)20 8996 7002. Fax: +44 (0)20 8996 7001. Email: [membership@bsi-global.com](mailto:membership@bsi-global.com).

Information regarding online access to British Standards via British Standards Online can be found at <http://www.bsi-global.com/bsonline>.

Further information about BSI is available on the BSI website at <http://www.bsi-global.com>.

## Copyright

Copyright subsists in all BSI publications. BSI also holds the copyright, in the UK, of the publications of the international standardization bodies. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI.

This does not preclude the free use, in the course of implementing the standard, of necessary details such as symbols, and size, type or grade designations. If these details are to be used for any other purpose than implementation then the prior written permission of BSI must be obtained.

Details and advice can be obtained from the Copyright & Licensing Manager.

Tel: +44 (0)20 8996 7070. Fax: +44 (0)20 8996 7553.

Email: [copyright@bsi-global.com](mailto:copyright@bsi-global.com).



389 Chiswick High Road  
London  
W4 4AL