BS EN ISO 7380-1:2022

BSI Standards Publication

Fasteners — Button head screws with reduced loadability

Part 1: Hexagon socket button head screws

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National foreword

This British Standard is the UK implementation of EN ISO 7380-1:2023. It is identical to ISO 7380-1:2022. It supersedes BS EN ISO 7380-1:2011, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee FME/9, Fasteners.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Fasteners - Button head screws with reduced loadability - Part 1: Hexagon socket button head screws (ISO 7380-1:2022)

Fixations - Vis à tête cylindrique bombée plate à capacité de charge réduite - Partie 1: Tête cylindrique bombée plate à six pans creux (ISO 7380-1:2022)

Mechanische Verbindungselemente - Schrauben mit abgeflachtem Halbrundkopf mit reduzierter Belastbarkeit - Teil 1: Schrauben mit abgeflachtem Halbrundkopf mit Innensechskant (ISO 7380-1:2022)

This European Standard was approved by CEN on 26 November 2022.

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European foreword

This document (EN ISO 7380-1:2023) has been prepared by Technical Committee ISO/TC 2 "Fasteners" in collaboration with Technical Committee CEN/TC 185 “Fasteners” the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2023, and conflicting national standards shall be withdrawn at the latest by July 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 7380-1:2011.

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Endorsement notice

The text of ISO 7380-1:2022 has been approved by CEN as EN ISO 7380-1:2023 without any modification.

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 2, *Fasteners*, Subcommittee SC 11, *Fasteners with metric external thread,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 185, *Fasteners*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 7380-1:2011), which has been technically revised.

The main changes are as follows:

— the whole standard (including title) has been improved to clearly point out that these hexagon socket button head screws have reduced loadability because of their head design (head dimensions and penetration of the hexagon socket);

— the reference thread length b has been increased to $3d$ for partially threaded screws M16, so that these screws can be tensile tested in accordance with ISO 3506-1 ($b \geq 3d$ is required to tensile test screws with reduced loadability);

— the reference datum for the outer diameter of the bearing face has been specified (see Figure 1), and the minimum values have been reduced to $d_{w,min} = d_{k,min} \times 0{,}92$ considering the manufacturing aspects for “button head” (see Table 1);

— e_{min} values have been rounded to two decimal places (see Table 1);

— the maximum depth of the hexagon socket t_{max} has been added (see Table 1);

— symbol w has been substituted by the new symbol w_b in order to define the wall thickness between the bottom of the cylindrical broached hole and the bearing face (see Figure 2 and Table 1);

— the definition of r_f in Figure 1 has been changed to allow the offset of the centre of the radius from the thread axis;

— the smallest and greatest standard lengths have been amended (see Table 2);

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