

AD 455: Design resistances for bespoke components in P358 (Green Book)

A reader has questioned the design resistances tabulated for bespoke components in P358 – the Green Book for nominally pinned joints to Eurocode 3.

The specific question related to the difference between the values quoted for Hollo-Bolts in Table G.60 and the data provided by the manufacturer.

The manufacturer provides *characteristic* resistances in their data for use with Eurocode designs. The Green Book tabulates *design*

resistances, which are the characteristic resistance divided by the γ_{M2} factor, which in the UK National Annex is specified as 1.25

Typical values of the characteristic resistances provided by the manufacturer are 124 kN in tension and 211 kN in shear for an M20 Hollo-Bolt.

The design resistances in Table G.60 are 99.2 kN and 169 kN respectively, being the characteristic resistance divided by 1.25

Designers should note that the Green Book was

first printed in 2014 and contains data appropriate at that time. It is quite possible that manufacturers may have subsequently changed material specification or component geometry, so checking with the manufacturer's latest data is advised.

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New and revised codes and standards

From BSI Updates November 2020

BS EN PUBLICATIONS

BS EN ISO 1460:2020

Metallic coatings. Hot dip galvanized coatings on ferrous materials. Gravimetric determination of the mass per unit area
supersedes BS EN ISO 1460:1995

BS EN ISO 2409:2020

Paints and varnishes. Cross-cut test
supersedes BS EN ISO 2409:2013

BS EN ISO 2810:2020

Paints and varnishes. Natural weathering of coatings. Exposure and assessment
supersedes BS EN ISO 2810:2004

BS EN ISO 15792-1:2020

Welding consumables. Test methods. Preparation of all-weld metal test pieces and specimens in steel, nickel and nickel alloys
supersedes BS EN ISO 15792-1:2008+A1:2011

BS EN ISO 15792-2:2020

Welding consumables. Test methods. Preparation of single-run and two-run technique test pieces and specimens in steel
supersedes BS EN ISO 15792-2:2008

BS EN 10210-3:2020

Hot finished steel structural hollow sections. Technical delivery conditions for high strength and weather resistant steels
no current standard is superseded

CORRIGENDA TO BRITISH STANDARDS

BS EN 10219-3:2020

Cold formed welded steel structural hollow sections. Technical delivery conditions for high strength and weather resistant steels
Corrigendum, October 2020

BS EN ISO 14002-1:2020

Environmental management systems. Guidelines for using ISO 14001 to address environmental aspects and conditions within an environmental topic area. General
Corrigendum, September 2020

BRITISH STANDARDS REVIEWED AND CONFIRMED

BS EN 10034:1993

Structural steel I and H sections. Tolerances on shape and dimensions

BS EN 10279:2000

Hot rolled steel channels. Tolerances on shape, dimension and mass

NEW WORK STARTED

EN XXX

Sustainability of construction works. Environmental product declarations. Horizontal rules for business-to-consumer communication
will supersede None

EN ISO 11124-5

Preparation of steel substrates before application of paints and related products. Specifications for metallic blast-cleaning abrasives. Steel cut wire shot
will supersede BS ISO 11124-5:2019

EN 1991-2

Eurocode 1. Actions on structures. Traffic loads on bridges and other civil engineering works
will supersede BS EN 1991-2:2003

EN 1993-1-8

Eurocode 3. Design of steel structures. Design of joints
will supersede BS EN 1993-1-8:2005

EN ISO 15611

Specification and qualification of welding procedures for metallic materials. Qualification based on previous welding experience
will supersede BS EN ISO 15611:2003

EN ISO 15613

Specification and qualification of welding procedures for metallic materials. Qualification based on pre-production welding test
will supersede BS EN ISO 15613:2004