

Metal scaffolding —

Part 2: Couplers —

Section 2.1 Specification for steel couplers, loose spigots and base-plates for use in working scaffolds and falsework made of steel tubes

This European Standard EN 74 has the status of a
British Standard

ICS 91.220

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National foreword

This Section of BS 1139 has been prepared under the direction of the Civil Engineering and Building Structures Standards Policy Committee (CSB/-). Together with BS 1139-2.2:1990, it supersedes BS 1139-2:1982, which is withdrawn.

This Section of BS 1139 is one of a series specifying requirements for the design, construction and testing of equipment for use in scaffolding and other temporary structures. BS 1139-2.1 is identical with EN 74:1988 "*Couplers, loose spigots and base-plates for use in working scaffolds and falsework made of steel tubes; Requirements and test procedures*" published by the European Committee for Standardization (CEN). EN 74 was produced as a result of agreement in CEN Technical Committee TC 53, Scaffolds, falsework and mobile access towers, in which the UK took an active part.

Some significant points about this Section of BS 1139 to which attention is drawn are the following.

- a) Other scaffold couplers and fittings commonly in use in the UK are dealt with in BS 1139-2.2.
- b) For right-angle and friction type sleeve couplers there are now two load classes. For right-angled couplers, Class A is equivalent to the grade given in BS 1139-2:1982. Class B is 50 % stronger than Class A.
For friction type sleeve couplers, the new Class B is equivalent to the British coupler in the earlier BS 1139-2 and the Class A is 50 % weaker than Class B and is currently not in use in the UK.
- Loose spigot pins and sleeve couplers with shear pins are currently not in use in the UK.
- c) The minimum permissible base-plate area is now a little smaller.
- d) Load bearing parallel couplers are now specified.
- e) There is an increased minimum yield strength requirement on all coupler fasteners (typically bolts) together with a restricted torque tightening/wedge range.
- f) The philosophy of testing has been changed to verify an individual coupler design and facilitate on-going quality assurance.
- g) Additional information is required to be marked on all products.
- h) There is limited information on hexagon sizes. The United Kingdom scaffolding industry generally requires hexagons to be between 20.3 mm and 20.8 mm across flats.

BS 1139 is now published in separate Parts and Sections as follows and on publication of Section 2.2, BS 1139-2:1982 will be withdrawn.

- *Part 1: Tubes;*
- *Section 1.1: Specification for steel tube;*
- *Section 1.2: Specification for aluminium tube;*
- *Part 2: Couplers;*
- *Section 2.1: Specification for steel couplers, loose spigots and base-plates for use in working scaffolds and falsework made of steel tubes;*
(Identical with EN 74)
- *Section 2.2: Specification for steel and aluminium couplers, fittings and accessories for use in tubular scaffolding¹⁾;*
- *Part 3: Specification for prefabricated access and working towers;*
- *Part 4: Specification for prefabricated steel splitheads and trestles;*

¹⁾ In preparation: it will cover couplers, fittings and accessories not included in Section 2.1. Additional couplers have not yet been harmonized.

— *Part 5: Specification for materials, dimensions, design loads and safety requirements for service and working scaffolds made of prefabricated elements²⁾*;

(Technically equivalent to HD 1000)

In examining the text of EN 74 certain printing errors have been noted. These were agreed by CEN/TC 53 at its 1990 London meeting and will be minuted by the CEN/TC 53 Secretariat for future amendment of the standard. They are as follows with the page numbers referring to the EN text.

- a) EN cover page. Include Iceland and Luxemburg in the list of countries.
- b) Page 2, last paragraph. Include Iceland, Ireland, Luxemburg and Sweden in the list of countries.
- c) Page 3, list of figures. At the bottom of the list of figure descriptions replace “Dimensions in mm” by “All linear dimensions shown in the figures are in millimetres”.
- d) Page 4, footnote 1). The word “coupler” has been omitted and the footnote should read:
 “For the purpose of this European Standard a coupler, spigot or base-plate of a new or old design submitted for the first time to specific tests specified in this standard”.
- e) Page 18, paragraph 3, line 2. The symbol “ $\leq$ ” is incorrect and the line should read:
 “ $\Delta_4 \geq 5,0$ mm or if the load $P = L (\Delta_4)$ cannot be reached.”

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, the EN title page, pages 2 to 20, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

²⁾ In preparation.

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Key words: Steel tubes, scaffolding, fasteners, pipe fittings, centring pins, supports, equipment specifications, inspection methods, sampling, mechanical tests.

English version

Couplers, loose spigots and base-plates for use in working scaffolds and falsework made of steel tubes; Requirements and test procedures

Raccords, goujons d'assemblage et semelles pour échafaudages de service et d'étalement en tubes d'acier; Spécifications et méthodes d'essai

Kupplungen, Zentrierbolzen und Fussplatten für Stahlrohr-Arbeitsgerüste und -Tragegerüste; Anforderungen, Prüfungen

This European Standard was accepted by CEN on 27 January 1988. CEN members are bound to comply with the requirements of the CEN/CENELEC Rules which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Central Secretariat or to any CEN member.

This European Standard exists in the official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to CEN Central Secretariat has the same status as the official versions.

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CEN

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Comité Européen de Normalisation
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Brief history

Since July 1970 CEN/TC 53 “*Components of tubular steel scaffoldings*” has dealt with European standardization within the field of scaffolding in order to abolish trade barriers due to differing safety requirements on building sites. After preliminary vote on the European Standard EN 39 “*Steel tubes for working scaffolds; requirements, tests*” the European Standard pr EN 74 “*Couplers and accessories for working scaffolds made of steel tubes; requirements and test procedures*” was prepared and in autumn 1975 CEN submitted the first draft of this standard to its CEN Members for preliminary vote. At the same time this standard was also adopted as ISO 4054 by ISO/TC 5 “*Metal pipes and fittings*” and in November 1977 it was submitted to the ISO Members for vote. As the ISO Standard was adopted the first edition of ISO 4054 “*Couplers, loose spigots and base-plates for use in working scaffolds made of steel tubes; requirements and test procedure*” was published in April 1980.

During its 19th meeting in Copenhagen in spring 1984 CEN/TC 53 (meanwhile renamed “*Scaffolds, falsework and mobile access towers*”) discussed once again the question concerning couplers for working scaffolds as well as for falsework and charged CEN/TC 53/WG 3 with the revision of the first draft pr EN 74. In this connection the higher requirements which are necessary for falsework should also be taken into consideration.

During its 21st plenary meeting in autumn 1986 in Zurich CEN/TC 53 accepted EN 74 as amended by its working group WG 3 and requested the DIN secretariat to send EN 74 out as a European standard by CEN for final voting.

According to the Common CEN/CENELEC Rules, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Netherlands, Norway, Portugal, Spain, Switzerland, United Kingdom.

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