

Lubricating nipples —

Part 4: Specification for hydraulic grease nipples

UDC 62 – 72:621.896

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW



Document Sharing Hub

Cooperating organizations

The Mechanical Engineering Standards Committee, under whose direction this British Standard was prepared, consists of representatives from the following:

Associated Offices Technical Committee	Department of the Environment (PSA)
Association of Consulting Engineers	Department of Trade (Marine Division)
Association of Hydraulic Equipment Manufacturers	Department of Transport
Association of Mining Electrical and Mechanical Engineers	Electricity Supply Industry in England and Wales
British Compressed Air Society	Engineering Equipment Users' Association
British Electrical and Allied Manufacturers' Association (BEAMA)	Federation of Manufacturers of Construction Equipment and Cranes
British Gas Corporation	Health and Safety Executive
British Gear Manufacturers' Association	Institution of Gas Engineers
British Internal Combustion Engine Manufacturers' Association	Institution of Mechanical Engineers*
British Pump Manufacturers' Association	Institution of Plant Engineers
British Steel Corporation	Institution of Production Engineers
British Steel Industry	Lloyd's Register of Shipping
Cbmpe	London Transport Executive
Chartered Institution of Building Services	Machine Tool Industry Research Association*
Crown Agents for Oversea Governments and Administrations	Ministry of Defence*
Department of Industry (Mechanical Engineering)	National Coal Board
Department of Industry (National Engineering Laboratory)	Oil Companies Materials Association
	Process Plant Association
	Society of Motor Manufacturers and Traders Limited
	Telecommunication Engineering and Manufacturing Association (TEMA)
	Water-tube Boilermakers' Association

The organizations marked with an asterisk in the above list, together with the following, were directly represented on the Technical Committee entrusted with the preparation of this British Standard:

Engineering Industries Association	Public Road Transport Association
Institute of Marine Engineers	Railway Industry Association of Great Britain
Ministry of Agriculture, Fisheries and Food	

This British Standard, having been prepared under the direction of the Mechanical Engineering Standards Committee, was published under the authority of the Executive Board and comes into effect on 30 September 1981

© BSI 08-1999

The following BSI references relate to the work on this standard:
Committee reference MEE/93
Draft for comment 79/76613 DC

ISBN 0 580 12258 1

Amendments issued since publication

Amd. No.	Date of issue	Comments

Contents

	Page
Cooperating organizations	Inside front cover
Foreword	ii
1 Scope	1
2 References	1
3 Dimensions	1
4 Materials	1
5 Check valves	1
6 Workmanship and finish	1
7 Corrosion protection	1
8 Marking	1
Appendix A Notes on the use of grease nipples	6
Figure 1 — Straight hydraulic grease nipples	2
Figure 2 — Angle hydraulic grease nipples	3
Figure 3 — Profile of hydraulic grease nipple head	4
Figure 4 — Thread profile	5
Figure 5 — Grouping of hydraulic grease nipples	7
Table 1 — Dimensions for straight hydraulic grease nipples	2
Table 2 — Dimensions for angle hydraulic grease nipples	3
Table 3 — Dimensions for thread profile	5
Publications referred to	Inside back cover

Foreword

This Part of this British Standard has been prepared under the direction of the Mechanical Engineering Standards Committee as Part 4 of BS 1486.

This Part of the standard covers hydraulic nipples, straight and angle types for use with connectors (sometimes referred to as couplers or nozzles) of the hydraulic chuck type.

The push-on type of connector will also service hydraulic nipples but less efficiently. Its use, therefore, should be limited to such applications where the hydraulic chuck type is precluded for reasons of space, etc.

At present, there is a lack of worldwide standardization on the coupling dimensions of button-head grease nipples and for safety reasons it has been decided not to include this type in this standard. Those intending to use these items are recommended to seek advice from manufacturers before specifying or ordering them.

This standard does not cover “limited supply” types as the use of these is very small. Adaptors, also, are not covered because it was considered impracticable to include all the types which a user could specify, neither is the $67\frac{1}{2}^\circ$ angle hydraulic type of grease nipple included.

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.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, 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.

1 Scope

This Part of this British Standard specifies the requirements for hydraulic grease nipples for use on machinery and vehicles, as follows:

hydraulic type threaded M6 × 1, M8 × 1, M10 × 1 and R1/8 of straight, 45° and 90° nominal angle types.

Notes on the use of grease nipples are given in Appendix A.

This Part of this British Standard does not deal with grease nipples for use on aircraft.

2 References

The titles of the publications referred to in this standard are listed on the inside back cover.

3 Dimensions

3.1 Overall dimensions. The overall dimensions of straight and angle type grease nipples shall be as given in Figure 1 and Figure 2 and Table 1 and Table 2 respectively.

3.2 Head profile. For both types of grease nipple, the profile of the head shall conform to the dimensions shown in Figure 3.

3.3 Screw threads. The dimensions of screw threads, designated M6, M8 and M10, shall be as given in Figure 4 and Table 3 and are intended for screwing into parallel holes threaded in accordance with class 6H of BS 3643.

Except for the gauge plane, screw threads designated R1/8 shall comply with the requirements of BS 21 and are intended for screwing into parallel holes threaded in accordance with R_p 1/8 of BS 21.

4 Materials

4.1 The bodies of hydraulic nipples shall be manufactured from low carbon steel complying with grade 220 M 07 of BS 970-1.

4.2 It is normal for the whole of a straight type grease nipple and the head of the angle type grease nipple to be hardened. The portion which engages with the hydraulic connector shall be case hardened to a depth of 0.08 mm to 0.13 mm. The hardness of the case shall be not less than 500 HV 1 when tested in accordance with BS 427-1 using a testing machine verified in accordance with Part 2 of that standard.

5 Check valves

All nipples shall incorporate a spring-loaded check valve which, with its seat, shall provide a seal against the ingress of dirt or other foreign matter but will admit lubricant under pressure and inhibit its escape. To reduce to a minimum the possibility of dirt collecting in the lubricant orifice, the check valve shall be located at the surface of the inlet point.

NOTE It is not intended that this valve should form a perfect seal against leakage under the pressure remaining in the bearing or lubricating passages after lubrication. If completely leakproof nipples are required, advice should be sought from the manufacturer.

6 Workmanship and finish

Nipples shall be free from burrs, loose scale, sharp edges and any other defects which might affect their serviceability.

7 Corrosion protection

As a minimum requirement, grease nipples shall be zinc plated and passivated in accordance with classification number Zn2 given in BS 1706.

8 Marking

The container or package containing nipples complying with the requirements of this standard shall be marked with the following minimum information.

- a) the number of this standard, i.e. BS 1486-4¹⁾;
- b) the thread size and angle of nipple.

NOTE 1 Markings will not normally be applied to the nipples.

NOTE 2 Other manufacturers' markings may be applied to the container or package.

¹⁾ Marking BS 1486-4 on or in relation to a product is a claim by the manufacturer that the product has been manufactured in accordance with the requirements of the standard. The accuracy of such a claim is therefore solely the manufacturer's responsibility. Enquiries as to the availability of third party certification to support such claims should be addressed to the Director, British Standards Institution, Maylands Avenue, Hemel Hempstead, Herts HP2 4SQ in the case of certification marks administered by BSI or to the appropriate authority for other certification marks.