

Pressure vessel details (dimensions) —

Part 1: Specification for davits for branch covers of steel vessels

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Pressure Vessel Standards Committee (PVE/-) to Technical Committee PVE/11 upon which the following bodies were represented:

Associated Offices Technical Committee
 Association of Consulting Engineers
 British Chemical Engineering Contractors' Association
 British Gas Corporation
 Chemical Industries Association
 Electricity Supply Industry in England and Wales
 Engineering Equipment and Materials Users' Association
 Health and Safety Executive
 Institution of Gas Engineers
 Institution of Mechanical Engineers
 Process Plant Association

This British Standard, having been prepared under the direction of the Pressure Vessel Standards Committee, was published under the authority of the Board of BSI and comes into effect on 31 August 1984

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The following BSI references relate to the work on this standard:
 Committee reference PVE/11
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Foreword

This British Standard has been prepared under the direction of the Pressure Vessel Standards Committee to cover the dimensions of pressure vessel details.

It is published in a number of Parts as follows:

- *Part 1: Specification for davits for branch covers of steel vessels;*
- *Part 2: Specification for saddle supports for horizontal cylindrical pressure vessels;*
- *Part 3: Dimensional tolerances for ferrous pressure vessels;*
- *Part 4: Standardized pressure vessels.*

This revision of this Part of BS 5276 has been made in order to include amendments dictated by practical experience with the 1976 edition. It supersedes BS 5276-1:1976 which is withdrawn.

In the application of this Part of this standard due regard has to be given to the requirements of the appropriate standard to which the vessel is designed and fabricated. Consideration has also to be given to ensure the compatibility of the recommended materials with the conditions of temperature and environment to which the davits will be exposed.

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 4, 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 dimensions and materials for davits for branch covers (blank flanges) fitted to steel pressure vessels of all types. Provision is made for flanges that comply with BS 1560 and BS 4504, in both vertical and horizontal positions, in sizes which are expected to be commonly used for access openings.

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

2 Materials

The grades of material used in the construction of davit details shall be in accordance with Table 1.

NOTE Such considerations as temperature, environment and compatibility with the vessel materials may dictate the use of higher grade materials which should be agreed between the purchaser and the manufacturer.

3 Dimensions

The dimensions of davits shall be in accordance with Table 1 and Table 2 according to the pressure rating, size and position of flange (vertical or horizontal).

Table 1 — Material and dimensional standards

Component	Material standard	Dimensional standard
Supporting bracket and sling rod lugs	BS 4360; grade 43A	Table 2 of this standard and/or Figure 1
Davit arm and sling rod	BS 970-1; category 070M20	
Davit arm thrust washer	BS 2870; designation CZ 108, condition H	
Nuts for sling rod	BS 4190; strength grade 4	BS 4190
Sling rod washer	BS 1449-1; grade CS4	BS 4320, form A
Bolt	BS 4190; strength grade 4.6	Table 2 of this standard
NOTE Specific applications should be checked against the design standard for restrictions on the proximity of welds.		

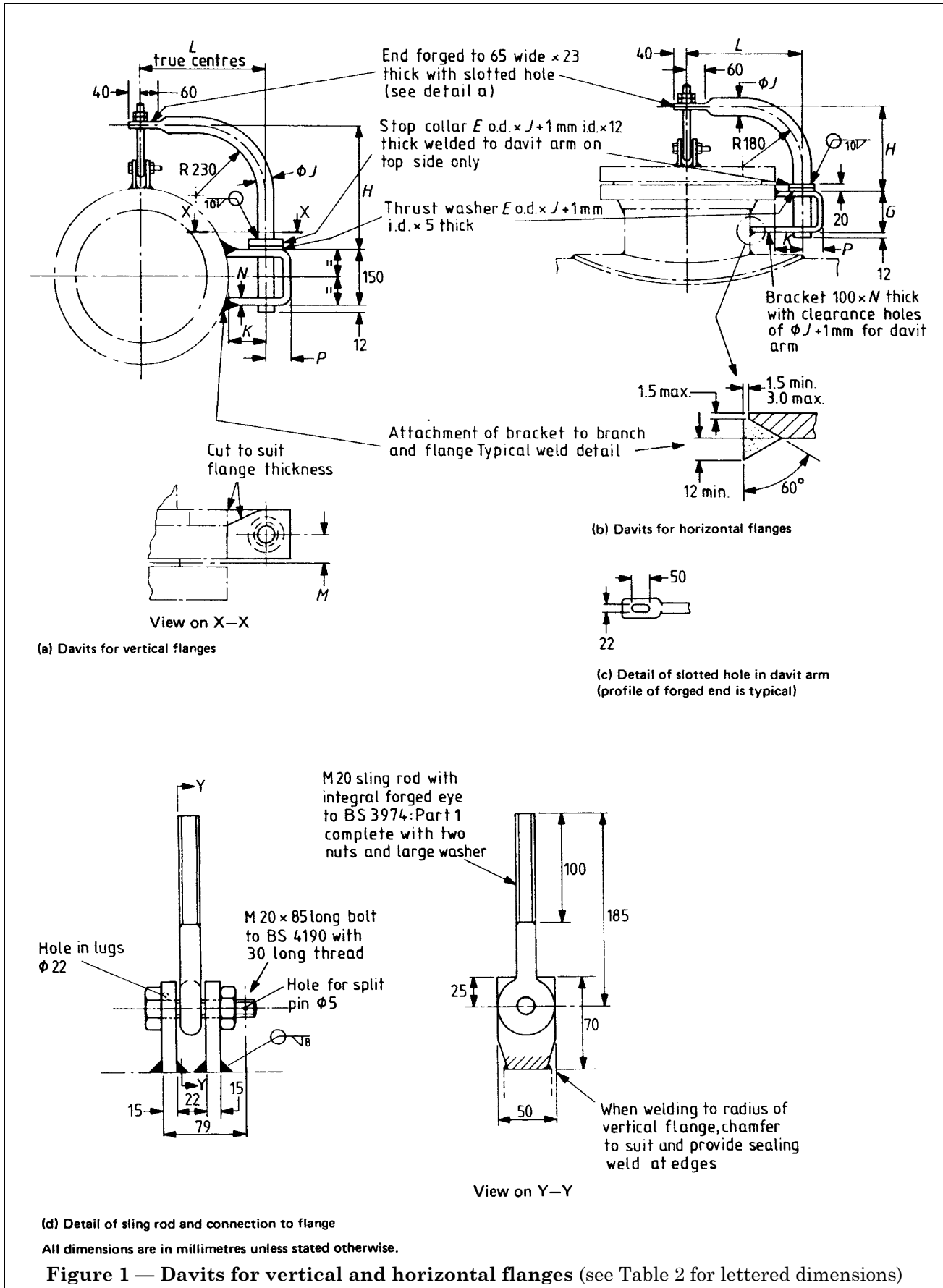


Table 2 — Dimensions of davits for vertical and horizontal flanges (see Figure 1)

Davits for vertical flanges																		
Nom. size	<i>E</i>	<i>H</i>	<i>J</i>	<i>K</i>	<i>L</i>	<i>M</i>	<i>N</i>	<i>P</i>	Nom. size	<i>E</i>	<i>H</i>	<i>J</i>	<i>K</i>	<i>L</i>	<i>M</i>	<i>N</i>	<i>P</i>	
Flange to BS 1560-2, class 150									Flange to BS 4504-1, nominal pressure 16 bar ^a									
in	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
20	60	425	35	61	415	37	12	50	500	60	425	35	53	415	37	12	50	50
24	70	480	45	60	472	41	12	50	600	70	495	45	59	484	44	12	50	50
Flange to BS 1560-2, class 300									Flange to BS 4504-1, nominal pressure 40 bar									
20	70	465	45	61	454	41	12	50	500	70	465	45	70	454	43	12	50	50
24	80	545	55	71	535	49	12	55										
Flange to BS 1560-2, class 600																		
20	80	490	55	74	490	51	12	55										
24	100	580	65	80	560	62	15	65										

Davits for horizontal flanges																		
Nom. size	<i>E</i>	<i>G</i>	<i>H</i>	<i>J</i>	<i>K</i>	<i>L</i>	<i>N</i>	<i>P</i>	Nom. size	<i>E</i>	<i>G</i>	<i>H</i>	<i>J</i>	<i>K</i>	<i>L</i>	<i>N</i>	<i>P</i>	
Flange to BS 1560-2, class 150									Flange to BS 4504-1, nominal pressure 16 bar									
in	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
20	70	180	215	45	69	418	12	50	500	70	165	215	45	61	418	12	50	50
24	70	185	215	45	74	480	12	50	600	70	175	215	45	60	480	12	50	50
Flange to BS 1560-2, class 300									Flange to BS 4504-1, nominal pressure 40 bar									
20	70	140	235	45	60	447	12	50	500	70	140	235	45	70	447	12	50	50
24	80	220	245	55	68	525	12	55										

^a 1 bar = 10⁵ N/m² = 100 kPa.

Publications referred to

BS 970, *Specification for wrought steels for mechanical and allied engineering purposes.*

BS 970-1, *General inspection and testing procedures and specific requirements for carbon, carbon manganese, alloy and stainless steels.*

BS 1449, *Steel plate, sheet and strip.*

BS 1449-1, *Specification for carbon and carbon manganese plate, sheet and strip.*

BS 1560, *Steel pipe flanges and flanged fittings (nominal sizes ½ in to 24 in) for the petroleum industry.*

BS 1560-2, *Metric dimensions.*

BS 2870, *Specification for rolled copper and copper alloys: sheet, strip and foil.*

BS 3974, *Pipe supports.*

BS 3974-1, *Pipe hangers, slider and roller type supports.*

BS 4190, *ISO metric black hexagon bolts, screws and nuts.*

BS 4320, *Metal washers for general engineering purposes.*

BS 4360, *Specification for weldable structural steels.*

BS 4504, *Flanges and bolting for pipes, valves and fittings. Metric series.*

BS 4504-1, *Ferrous.*

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