

Specification for

**Dimensions of hydraulic
connectors and adaptors**

ICS 23.100.30

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee MCE/18, Fluid power systems and components, upon which the following bodies were represented:

Association of British Mining Equipment Companies
 British Compressed Air Society
 British Fluid Power Association
 British Hydrodynamics Research Association
 Department of Trade and Industry (National Engineering Laboratory)
 Ministry of Defence
 University of Bath

The following bodies were also represented in the drafting of the standard, through a subcommittee panel:

British Iron and Steel Producers' Association
 Engineering Equipment and Materials Users' Association

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Amendments issued since publication

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Foreword

This revision of BS 5200 has been prepared by Technical Committee MCE/18 and supersedes BS 5200 : 1986, which is withdrawn. An improved design of 'O'-ring seal ripple which is in general use in the fluid power industry is now incorporated. Male thread undercut details have also been added to suit bonded washer type seals. Maximum working pressure specifications have been revised so as to be consistent with current hose standards.

Table 2, Figure 1 and Figure 3 have been corrected by Amendment No. 1.

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.

1 Scope

This British Standard specifies the basic dimensions necessary to ensure interchangeability of hydraulic connectors and adaptors for connecting rigid and flexible tubing to hydraulic fluid power system components.

Fourteen styles of adaptor and five styles of hose fitting are specified. Adaptors and hose fittings have been allocated style designation letters and female end fittings type designation letters, according to their shape and dimensions.

For female ends, a conventional plain nipple is specified for face sealing and a nipple with a groove for 'O'-ring sealing. The appropriate 'O'-rings for use with the fittings and adaptors are also specified.

A spherical seating is specified as an alternative to the female conical seating, provided that all other limiting dimensions are maintained.

This standard specifies maximum working pressures but does not specify materials, production processes or dimensions that are not related to interchangeability.

NOTE 1. Hose fitting styles B, D, E and G may be made from swept elbow bends as specified in BS 5327.

NOTE 2. It is the responsibility of the designer to ensure that materials and production processes are compatible with the fluids to be encountered in service.

2 References

2.1 Normative references

This British Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this British Standard only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

2.2 Informative references

This British Standard refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Dimensions

The dimensions and details of the end interfaces and the maximum envelope dimensions for hose fittings and adaptors shall be in accordance with the tables and figures given in table 1.

NOTE. The dimensions quoted in these tables apply after any surface treatment.

4 Screw threads

All screw threads shall be in accordance with BS 2779 and all external threads shall be in accordance with class A tolerances of that standard.

5 Thread undercuts

All thread undercuts for male adaptors shall be in accordance with Form B of BS 1936 : Part 1 : 1952 except those for 'O'-rings which shall be in accordance with BS 5380.

NOTE. Where the male adaptor is used as a stud fitting with bonded washer type seals the undercut should be in accordance with figure 23 and table 11.

6 Sealing surfaces

All sealing surfaces shall be smooth and shall have the surface texture specified in figures 1,2,3 and 23, when measured in accordance with BS 1134 : Part 1.

7 Maximum working pressure

Every fitting and adaptor shall be capable of withstanding, without deformation, the pressure specified in table 10.

8 Marking

8.1 Each fitting or adaptor shall be permanently marked with either:

a) the manufacturer's name or trademark and the designations listed 1) to 4)¹⁾:

- 1) the number of this British Standard, i.e. BS 5200;
- 2) the relevant style letter of the hose fitting or adaptor (see table 1);
- 3) the relevant type letter of female ends:
 - i) type C, with conical sealing nipple (see figure 2 and table 2); or
 - ii) type O, with 'O'-ring sealing nipple (see figure 1 and table 2); or
 - iii) type S, with spherical sealing nipple (see figure 2 and table 2);
- 4) the thread designation or hose internal diameter (i.d.) (see tables 2 to 10); or

¹⁾ Marking BS 5200 : 1997 on or relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is solely the claimant's responsibility. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.

b) the manufacturer's name or trademark and a code identifier which shall be correlated with the designations of 1) to 4) in the manufacturer's literature.

8.2 The following are examples of designations:

- a) BS 5200-AO-G ½ to identify a G ½ threaded straight hose fitting with an 'O'-ring sealing nipple, for 12.5 mm hose;
- b) BS 5200-LC-G ¾ to identify a 90° male-female G ¾ threaded adaptor with a conical sealing nipple;
- c) BS 5200-R-G 2 to identify a 135° male-male G 2 threaded 'O'-ring adjustable adaptor.

9 Threaded ports

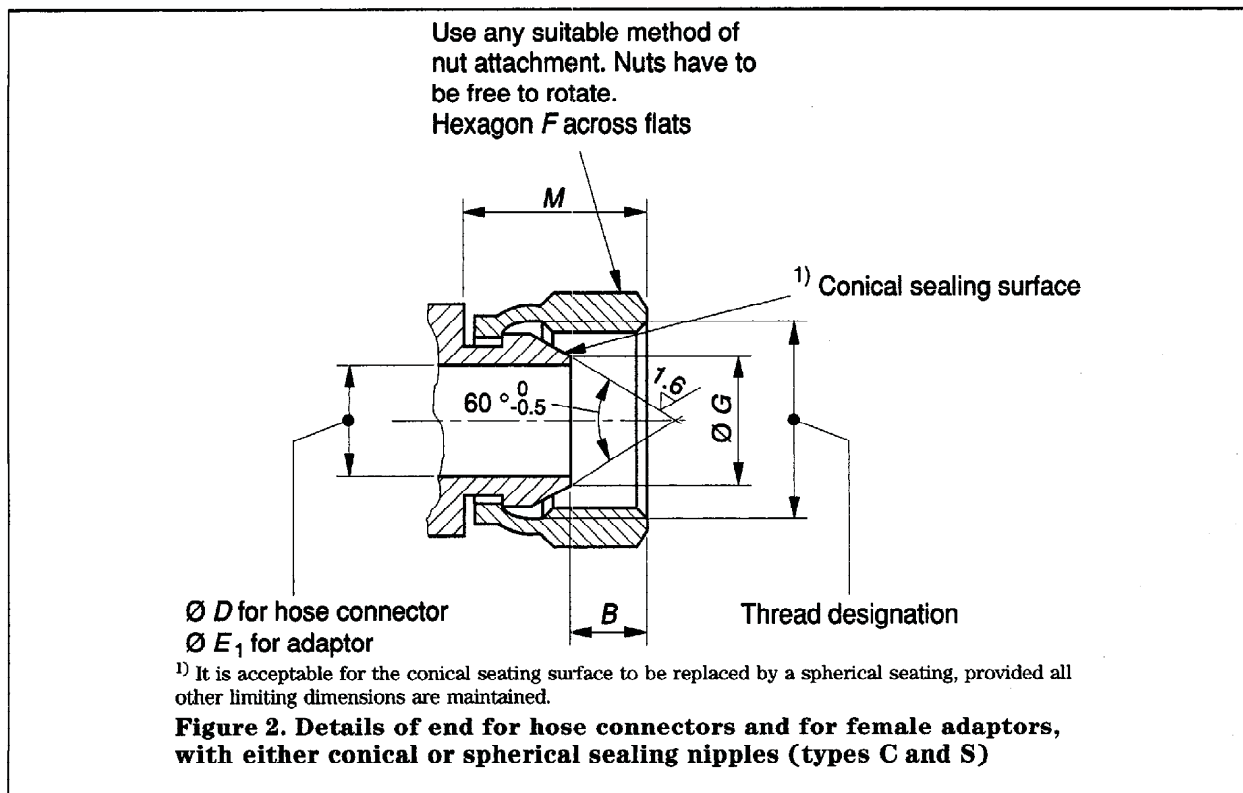
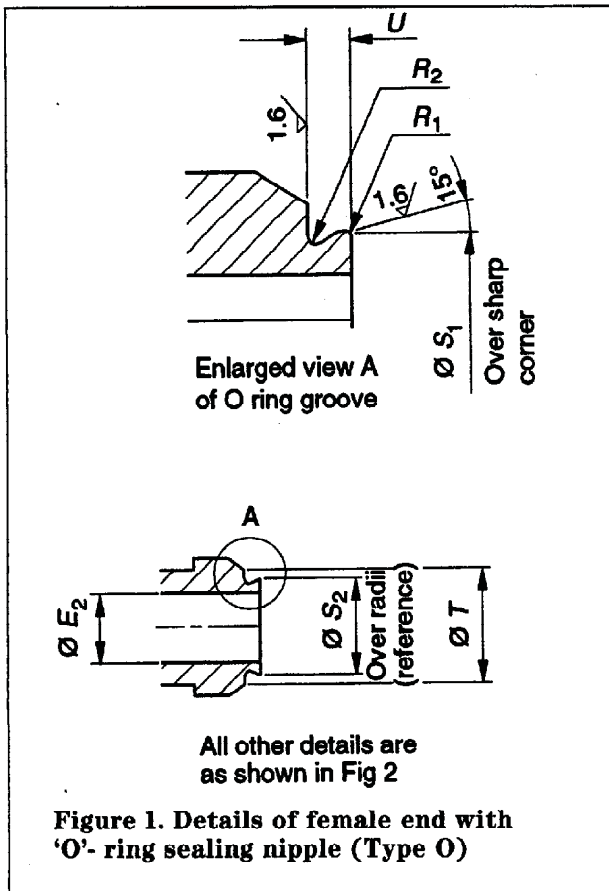
Threaded port dimensions to accommodate male adaptors, when used as stud fittings, shall be in accordance with BS 4368 : Part 1 and BS 4368 : Part 3. Spot facing, if necessary, shall be compatible with the appropriate bonded washer seal.

NOTE. It is advisable to refer to the bonded seal manufacturer's recommendations.

The port dimensions of 'O'-ring sealing shall be in accordance with BS 5380.

| Table 1. Summary of tables of dimensions and related figures | | | | |
|---|-----------------------------------|----------------------------|----------------------------------|--|
| Description of hose fitting or adaptor | End details | | Complete hose fitting or adaptor | Style (and type of end ¹⁾) |
| | End no. 1 | End no. 2 | | |
| Hose fittings | | | | |
| straight | Figures 1 and 2, table 2 | – | Figure 4, table 3 | A ¹⁾ |
| 90° tubular elbow | Figures 1 and 2, table 2 | – | Figure 5, table 3 | B ¹⁾ |
| 135° tubular elbow | Figures 1 and 2, table 2 | – | Figure 6, table 3 | D ¹⁾ |
| 90° block elbow | Figures 1 and 2, table 2 | – | Figure 7, table 3 | E ¹⁾ |
| 135° block elbow | Figures 1 and 2, table 2 | – | Figure 8, table 3 | G ¹⁾ |
| Male-male adaptors | | | | |
| straight | Figure 3, table 2 | Figure 3, table 2 | Figure 9, table 4 | H |
| 90° | Figure 3, table 2 | Figure 3, table 2 | Figure 10, table 4 | I |
| 135° | Figure 3, table 2 | Figure 3, table 2 | Figure 11, table 4 | J |
| tee | Figure 3, table 2 | Figure 3, table 2 | Figure 12, table 4 | K |
| Male-female adaptors | | | | |
| straight | Figure 3, table 2 | Figures 1 and 2, table 2 | Figure 13, table 5 | L ¹⁾ |
| 90° | Figure 3, table 2 | Figures 1 and 2, table 2 | Figure 14, table 5 | N ¹⁾ |
| 135° | Figure 3, table 2 | Figures 1 and 2, table 2 | Figure 15, table 5 | P ¹⁾ |
| Straight 'O'-ring adaptors | | | | |
| male-male | Figures 1 and 2 of BS 5380 : 1984 | Figure 3, table 2 | Figure 16, table 6 | Q |
| male-female | Figures 1 and 2 of BS 5380 : 1984 | Figures 1 and 2, table 2 | Figure 17, table 6 | R ¹⁾ |
| 'O'-ring adjustable adaptors | | | | |
| 90° male-male | Figure 3, table 2 | Figure 3 of BS 5380 : 1984 | Figure 18, table 7 | T |
| 135° male-male | Figure 3, table 2 | Figure 3 of BS 5380 : 1984 | Figure 19, table 7 | U |
| 90° male-female | Figure 3 of BS 5380 : 1984 | Figures 1 and 2, table 2 | Figure 20, table 8 | V ¹⁾ |
| 135° male-female | Figure 3 of BS 5380 : 1984 | Figures 1 and 2, table 2 | Figure 21, table 8 | W ¹⁾ |
| Bulkhead adaptor | | | | |
| male-male | Figure 3, table 2 | Figure 3, tables 2 and 9 | Figure 22, table 9 | X |

¹⁾ Type letter as listed in 8.1a).



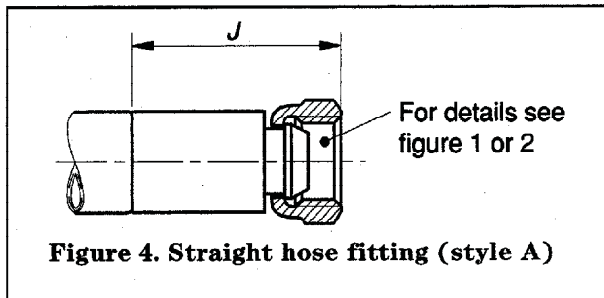
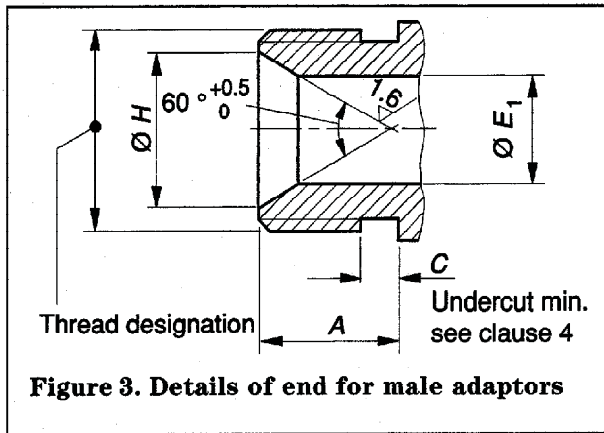


Table 2. Dimensions of hose fitting and adaptor ends

| Thread size | Hose i.d. nominal mm | A | B | C | D min. | E ₁ | E ₂ max. | F nom. | G | H | M max. | Sealing ring groove | | | | 'O' ring ref no. ²⁾ | | |
|-------------------|-------------------------|-------|-------|-------|--------|----------------|---------------------|--------|-------|-------|--------|---------------------|-----------------------|------------|------------|--------------------------------|----------------|-----------------------|
| | | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | S ₁ mm | S ₂ Ref mm | T mm | U mm | | R ₁ | R ₂ |
| Tolerances | | | | | | | | | | | | | | | | | | |
| | | ±0.25 | +0.50 | ±0.25 | | ±0.25 | | | ±0.12 | ±0.15 | | ±0.05 | | +0.10 0 | +0.10 0 | +0.10 0 | +0.10 0 | |
| G ¼ | 5.0 | 8 | 4.3 | 2 | 3.0 | 3.5 | — | 14 | 5.6 | 7.5 | 16 | — | — | — | — | — | — | — |
| G ¼ | 6.3 | 11 | 5.2 | 3 | 4.0 | 4.7 | 4.5 | 19 | 7.2 | 10.4 | 17 | 7.49 | 7.37 | 9.00 | 1.22 | 0.15 | 0.15 | Special ³⁾ |
| G ¾ | 10.0 | 12 | 6.0 | 3 | 7.0 | 7.9 | 7.1 | 22 | 10.4 | 14.0 | 19 | 10.02 | 9.80 | 12.67 | 1.98 | 0.30 | 0.36 | 0081-16 |
| G ½ | 12.5 | 14 | 6.5 | 4 | 9.0 | 11.1 | 9.7 | 27 | 13.5 | 17.5 | 22 | 13.07 | 12.85 | 15.72 | 1.98 | 0.30 | 0.36 | 0121-16 |
| G ¾ ¹⁾ | 16.0 | 16 | 9.7 | 4 | 12.0 | 14.3 | 12.0 | 30 | 16.8 | 19.3 | 25 | 15.11 | 14.90 | 17.77 | 1.98 | 0.30 | 0.36 | 0131-16 |
| G ¾ | 19.0 | 16 | 8.7 | 4 | 14.0 | 16.7 | 15.5 | 32 | 19.0 | 22.9 | 25 | 18.66 | 18.44 | 21.31 | 1.98 | 0.30 | 0.36 | 0171-16 |
| G 1 | 25.0 | 19 | 10.5 | 5 | 19.0 | 22.2 | 21.4 | 41 | 24.6 | 28.7 | 32 | 23.81 | 23.59 | 26.47 | 1.98 | 0.30 | 0.36 | 0221-16 |
| G 1¼ | 31.5 | 20 | 10.1 | 5 | 26.0 | 28.6 | 27.0 | 50 | 31.1 | 36.8 | 33 | 30.72 | 30.51 | 33.37 | 1.98 | 0.30 | 0.36 | 0291-16 |
| G 1½ | 38.0 | 22 | 12.5 | 5 | 32.0 | 33.3 | 31.8 | 55 | 37.2 | 42.7 | 37 | 36.89 | 36.68 | 39.55 | 1.98 | 0.30 | 0.36 | 0351-16 |
| G 2 | 51.0 | 25 | 16.1 | 5 | 42.0 | 46.0 | 44.5 | 70 | 50.0 | 54.6 | 40 | 49.41 | 49.20 | 52.31 | 2.21 | 0.30 | 0.36 | 032 ⁴⁾ |

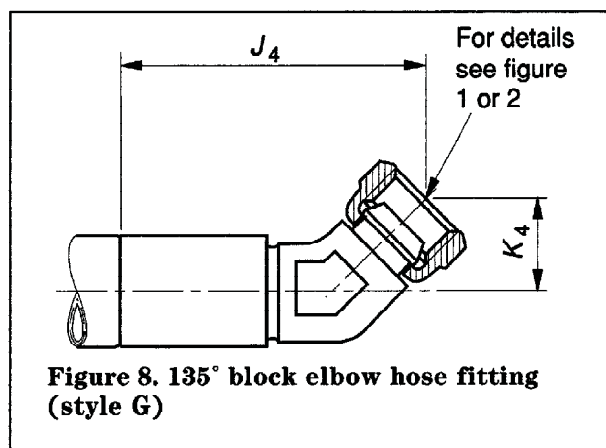
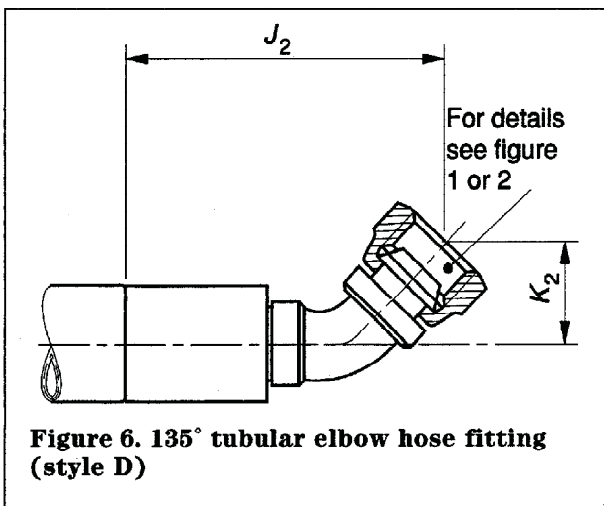
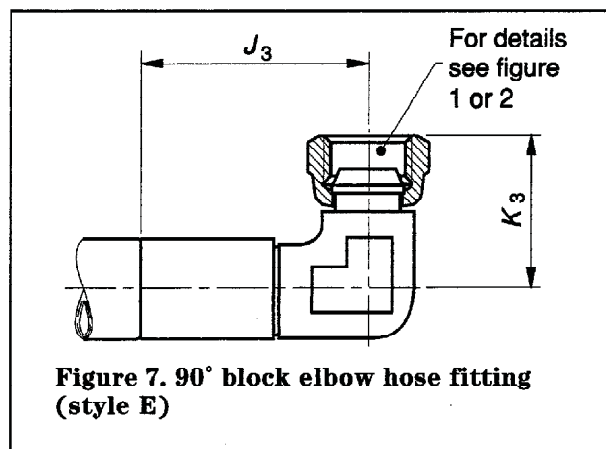
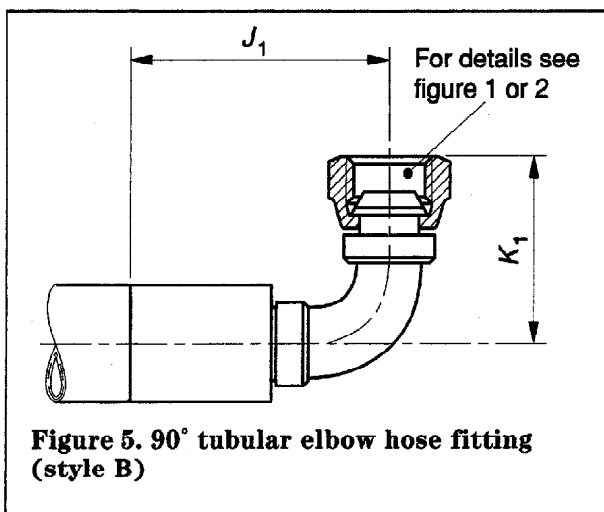
1) Described in BS 2779 as a non-preferred size

2) In accordance with BS 4518 (Except for that described as 'special')

3) Internal Ø 6.5 ± 0.15 mm
Section Ø 1.0 ± 0.07 mm

4) In accordance with BS 1806

Unless otherwise agreed between purchaser and supplier 'O'-rings shall be made from nitrile (NBR) rubber with a hardness of ⁺¹⁰₀ IRHD

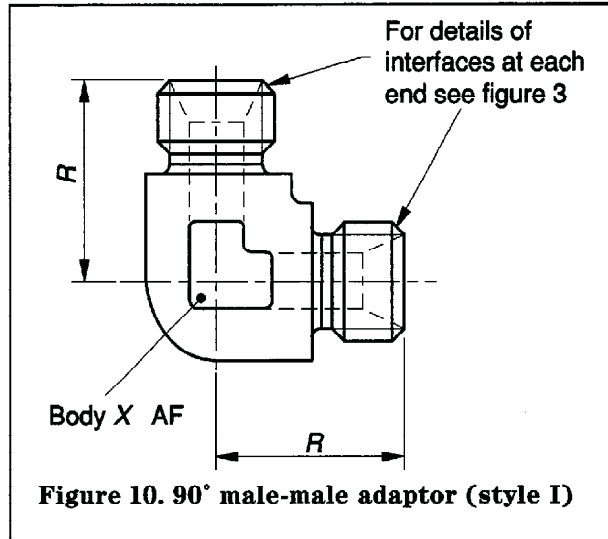
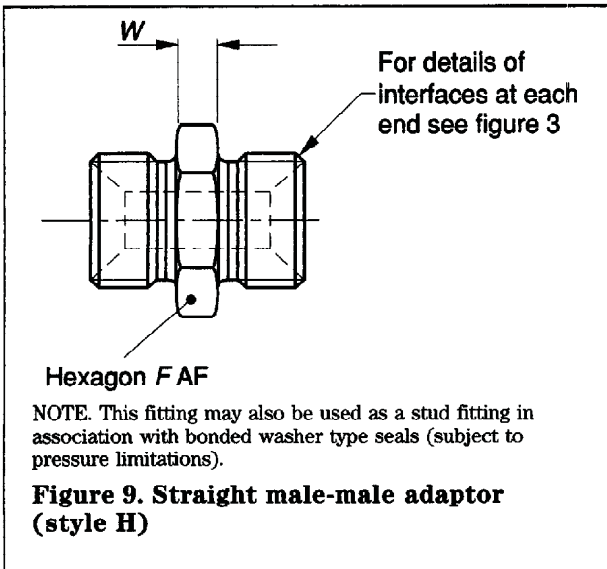


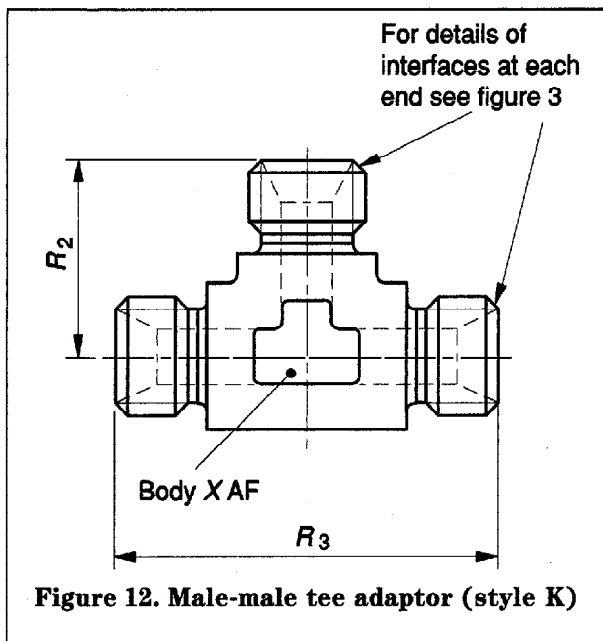
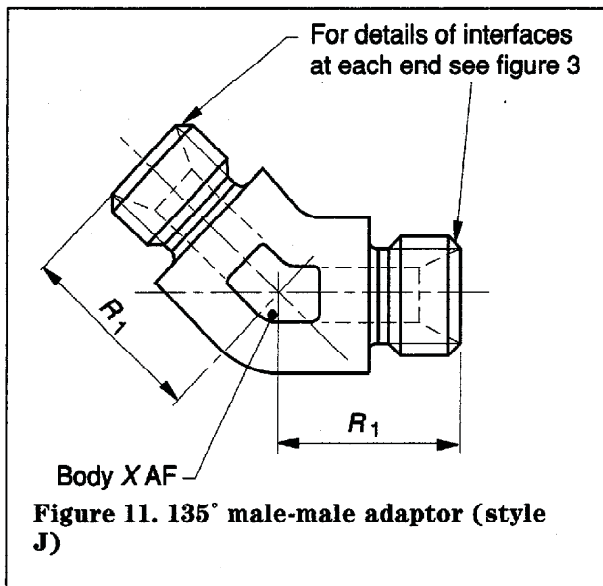
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Table 3. Dimensions of hose fittings

| Hose i.d. nominal mm | Thread designation | <i>J</i> max. mm | <i>K</i> ₁ max. mm | <i>J</i> ₁ max. mm | <i>K</i> ₂ max. mm | <i>J</i> ₂ max. mm | <i>K</i> ₃ max. mm | <i>J</i> ₃ max. mm | <i>K</i> ₄ max. mm | <i>J</i> ₄ max. mm |
|----------------------|--------------------|------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| 5.0 | G ¼ | 49 | 33 | 47 | 20 | 69 | 33 | 50 | 20 | 68 |
| 6.3 | G ¼ | 66 | 42 | 59 | 25 | 78 | 34 | 54 | 21 | 68 |
| 10.0 | G ⅜ | 69 | 50 | 71 | 28 | 89 | 38 | 59 | 24 | 76 |
| 12.5 | G ½ | 73 | 59 | 85 | 32 | 102 | 43 | 68 | 27 | 86 |
| 16.0 | G ⅝ ¹⁾ | 76 | 66 | 89 | 34 | 107 | 50 | 72 | 31 | 94 |
| 19.0 | G ¾ | 89 | 83 | 103 | 43 | 130 | 55 | 81 | 32 | 101 |
| 25.0 | G 1 | 105 | 93 | 128 | 48 | 150 | 61 | 95 | 36 | 111 |
| 31.5 | G 1¼ | 117 | 104 | 143 | 52 | 170 | 65 | 109 | 37 | 122 |
| 38.0 | G 1½ | 120 | 121 | 169 | 57 | 200 | 72 | 120 | 47 | 141 |
| 51.0 | G 2 | 140 | 129 | 215 | 69 | 232 | 94 | 136 | 74 | 177 |

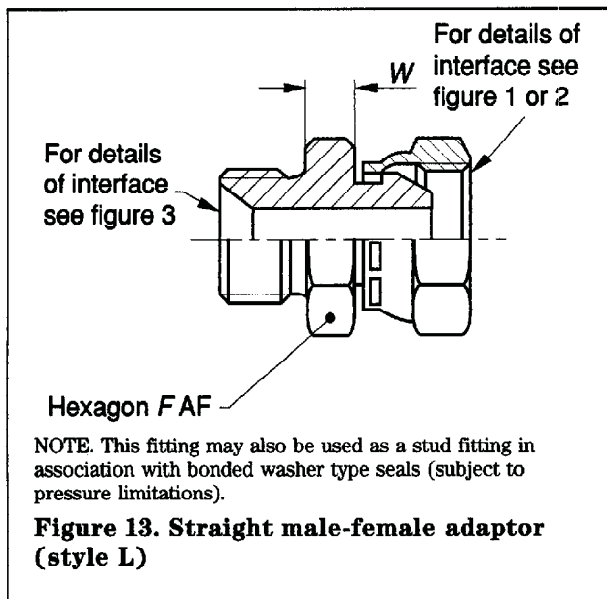
¹⁾ Described in BS 2779 as a non-preferred size.

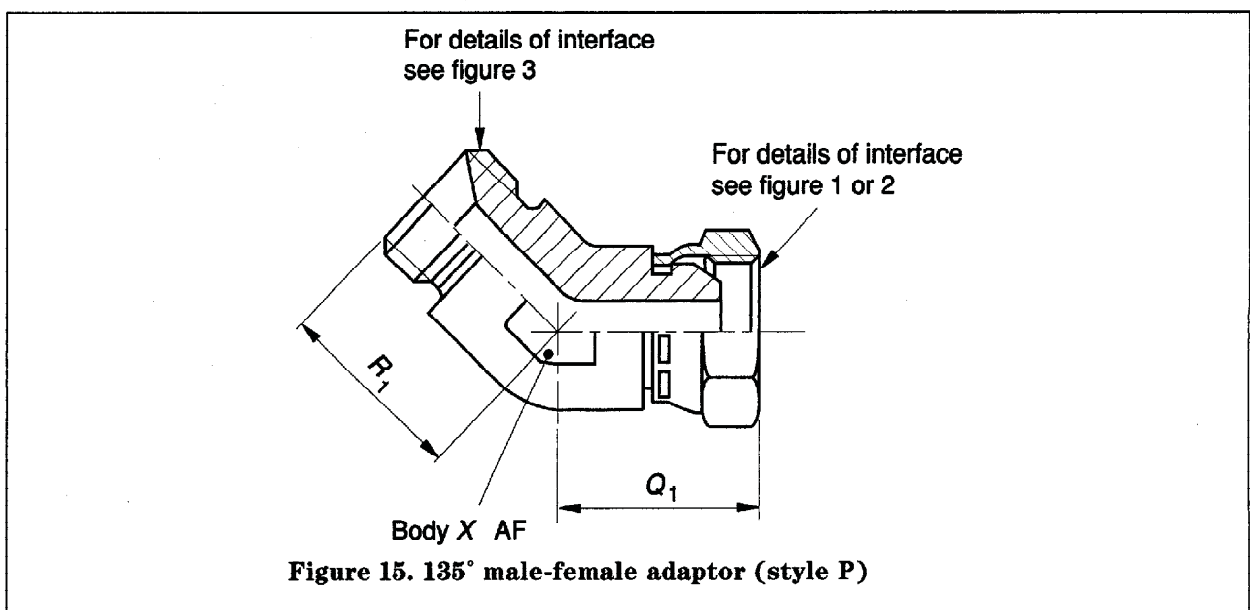
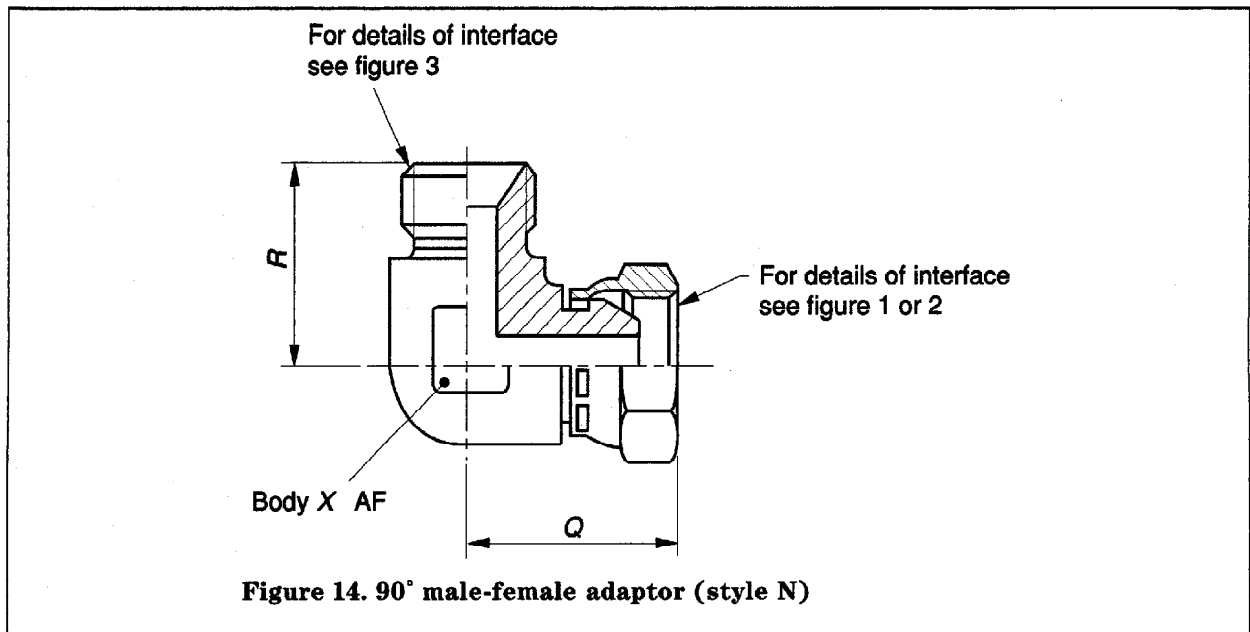




| Table 4. Dimensions of male-male adaptors | | | | | | | |
|---|-------------------|-----------|----------------------|----------------------|----------------------|-----------|--------------|
| Thread designation | F nom. mm | R mm | R ₁ mm | R ₂ mm | R ₃ mm | W mm | X nom. mm |
| | Tolerances | | | | | | |
| | | +3.0 0 | +3.0 0 | +3.0 0 | +3.0 0 | +0.5 0 | |
| G ¼ | 14 | 25.4 | 20.3 | 22.2 | 44.5 | 5 | 17 |
| G ¼ | 19 | 25.4 | 20.3 | 22.2 | 44.5 | 7 | 17 |
| G ⅜ | 22 | 28.5 | 22.8 | 25.4 | 50.8 | 8 | 22 |
| G ½ | 27 | 32.5 | 25.5 | 30.5 | 61.0 | 10 | 24 |
| G ⅝ ¹⁾ | 30 | 36.5 | 28.9 | 31.7 | 63.5 | 12 | 27 |
| G ¾ | 32 | 41.3 | 31.2 | 38.1 | 76.2 | 12 | 32 |
| G 1 | 41 | 44.5 | 33.7 | 44.4 | 88.9 | 15 | 41 |
| G 1¼ | 50 | 50.8 | 35.5 | 50.8 | 101.6 | 19 | 50 |
| G 1½ | 55 | 59.0 | 45.2 | 57.0 | 114.0 | 23 | 55 |
| G 2 | 70 | 77.5 | 56.4 | 63.0 | 126.0 | 29 | 70 |

¹⁾ Described in BS 2779 as a non-preferred size.





| Table 5. Dimensions of male-female adaptors | | | | | | | |
|---|-------------------|-----------|-----------|-------------------|-------------------|-----------|-----------|
| Thread designation | F nom. mm | Q mm | R mm | Q ₁ mm | R ₁ mm | W mm | X nom. mm |
| | Tolerances | | | | | | |
| | | 0 -3.0 | +3.0 0 | +3.0 -3.0 | +3.0 0 | +0.5 0 | |
| G ½ | 14 | 32 | 25.4 | 27 | 20.3 | 5 | 17 |
| G ¾ | 19 | 34 | 25.4 | 29 | 20.3 | 7 | 17 |
| G 1 | 22 | 38 | 28.5 | 33 | 22.8 | 8 | 22 |
| G 1½ | 27 | 44 | 32.5 | 37 | 25.5 | 10 | 24 |
| G 2 ¹⁾ | 30 | 50 | 36.5 | 43 | 28.9 | 12 | 27 |
| G 2½ | 32 | 55 | 41.3 | 45 | 31.2 | 12 | 32 |
| G 3 | 41 | 61 | 44.5 | 50 | 33.7 | 15 | 41 |
| G 3½ | 50 | 66 | 50.8 | 51 | 35.5 | 19 | 50 |
| G 4 | 55 | 72 | 59.0 | 58 | 45.2 | 23 | 55 |
| G 5 | 70 | 94 | 77.5 | 73 | 56.4 | 29 | 70 |

¹⁾ Described in BS 2779 as a non-preferred size.

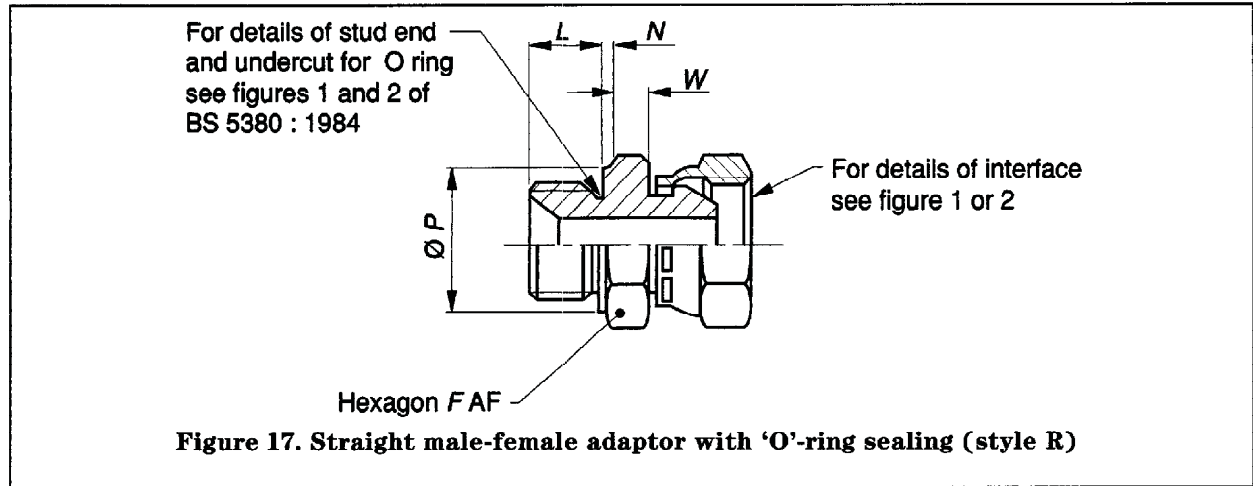
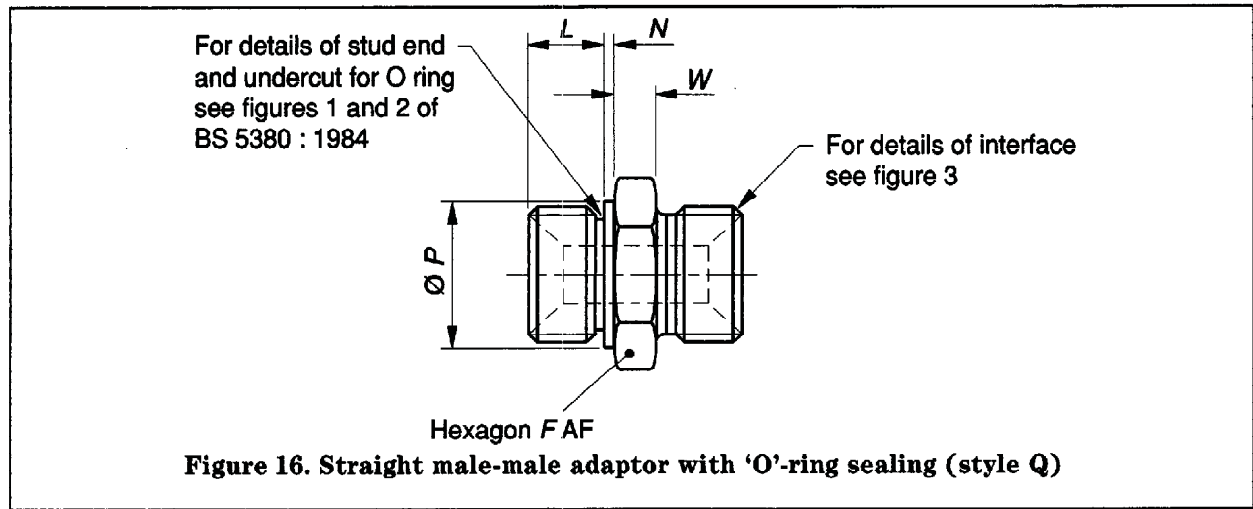


Table 6. Dimensions of adaptors with 'O'-ring sealing

| Thread designation | F nom. mm | L max. mm | N min. mm | P nom. mm | W mm | 'O'-ring ref. no. ²⁾ |
|--------------------|--------------|--------------|--------------|--------------|-----------|---------------------------------|
| Tolerances | | | | | | |
| | | | | | +0.5 0 | |
| G ½ | 14 | 10.5 | 1.0 | 14 | 5 | 0081-16 |
| G ¼ | 19 | 11.0 | 1.5 | 18 | 7 | 0101-16 |
| G ¾ | 22 | 12.5 | 2.0 | 22 | 8 | 0136-24 |
| G ½ | 27 | 15.0 | 2.5 | 26 | 10 | 0176-24 |
| G ¾ ¹⁾ | 30 | 16.3 | 2.5 | 30 | 12 | 0195-30 |
| G ¾ | 32 | 16.3 | 2.5 | 32 | 12 | 0225-30 |
| G 1 | 41 | 19.1 | 2.5 | 39 | 15 | 0295-30 |
| G 1¼ | 50 | 21.4 | 2.5 | 49 | 19 | 0365-30 |
| G 1½ | 55 | 22.5 | 2.5 | 55 | 23 | 0425-30 |
| G 2 | 70 | 25.7 | 3.0 | 68 | 29 | 0545-30 |

NOTE. These adaptors are suitable for assembly with ports in accordance with BS 5380.

¹⁾ Described in BS 2779 as a non-preferred size.

²⁾ In accordance with BS 4518.

For details of interface
see figure 3

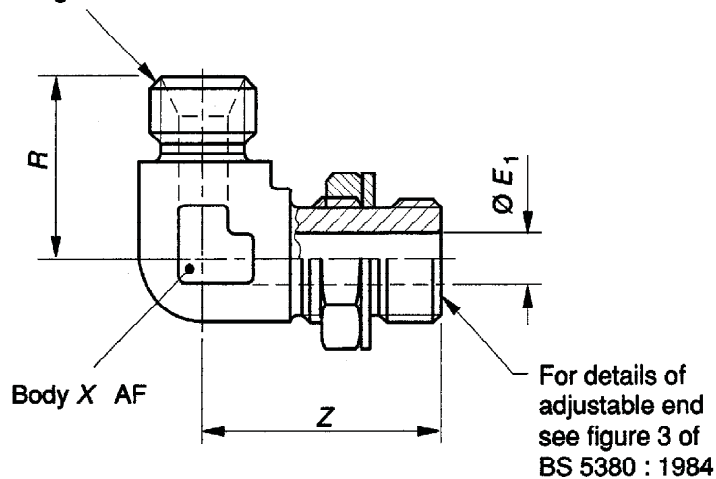


Figure 18. 90° male-male 'O'-ring adjustable adaptor (style T)

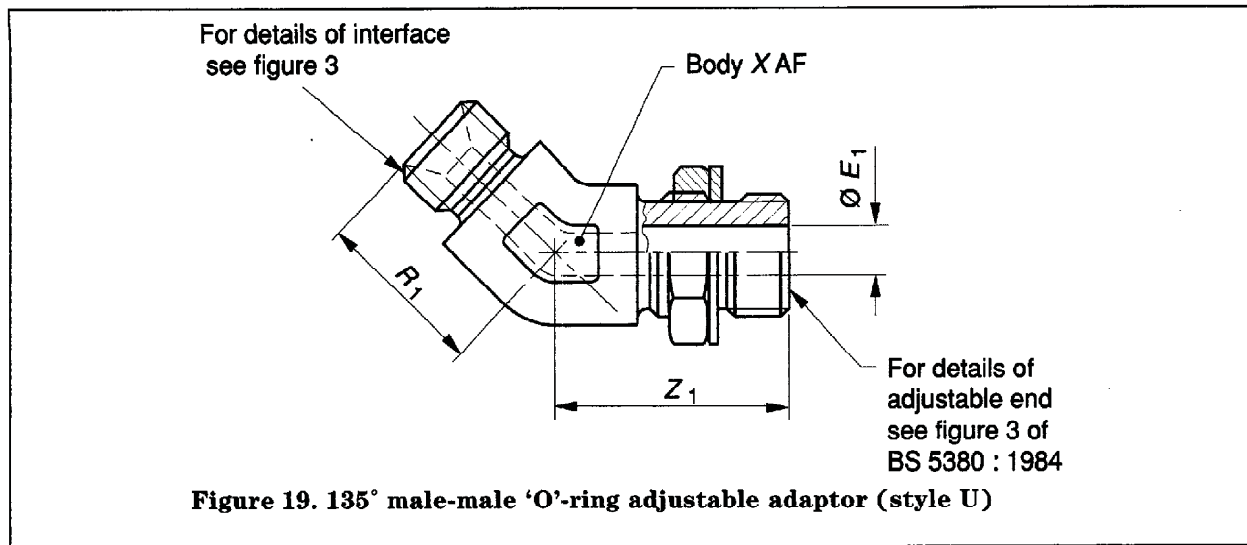


Table 7. Dimensions of male-male 'O'-ring adjustable adaptors

| Thread designation | E_1 mm | R mm | Z mm | R_1 mm | Z_1 mm | X nom. mm | 'O'-ring ref. no. |
|---------------------|-------------------|-----------|-----------|-------------|-------------|-------------------|-------------------|
| | Tolerances | | | | | | |
| | | +3.0 0 | +3.0 0 | +3.0 0 | +3.0 0 | | |
| G 1/8 | 3.5 | 21.0 | 22.0 | 20.3 | 25.4 | 17 | 0081-16 |
| G 1/4 | 4.7 | 25.4 | 27.6 | 20.3 | 25.4 | 17 | 0101-24 |
| G 3/8 | 7.9 | 28.5 | 32.9 | 22.8 | 29.2 | 22 | 0136-24 |
| G 1/2 | 11.1 | 32.5 | 42.0 | 25.5 | 37.2 | 24 | 0176-24 |
| G 5/8 ¹⁾ | 14.3 | 36.5 | 43.5 | 28.9 | 38.4 | 27 | 0195-30 |
| G 3/4 | 16.7 | 41.3 | 51.3 | 31.2 | 44.0 | 32 | 0225-30 |
| G 1 | 22.2 | 44.5 | 54.2 | 33.7 | 47.1 | 41 | 0295-30 |
| G 1 1/4 | 28.6 | 50.8 | 62.9 | 35.5 | 55.0 | 50 | 0365-30 |
| G 1 1/2 | 33.3 | 59.0 | 66.1 | 45.2 | 58.2 | 55 | 0425-30 |
| G 2 | 46.0 | 77.5 | 82.5 | 56.4 | 76.5 | 70 | 0545-30 |

NOTE. These adaptors are suitable for assembly with ports in accordance with BS 5380.

¹⁾ Described in BS 2779 as a non-preferred size.

²⁾ In accordance with BS 4518.

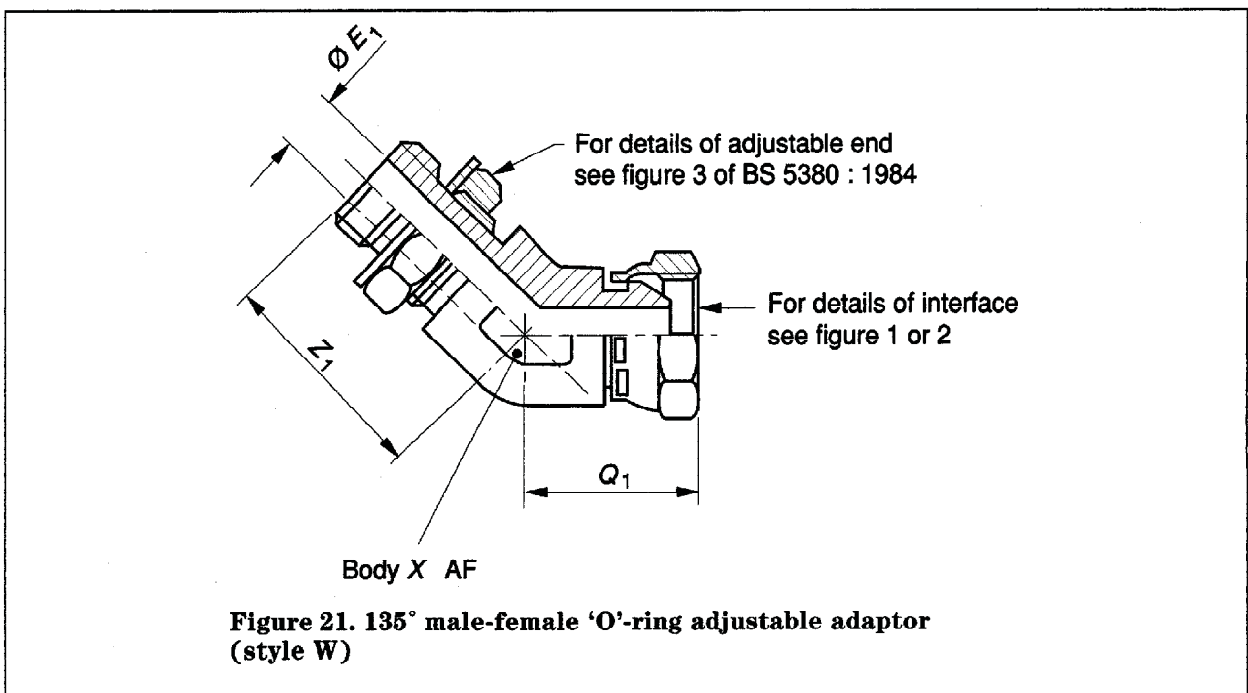
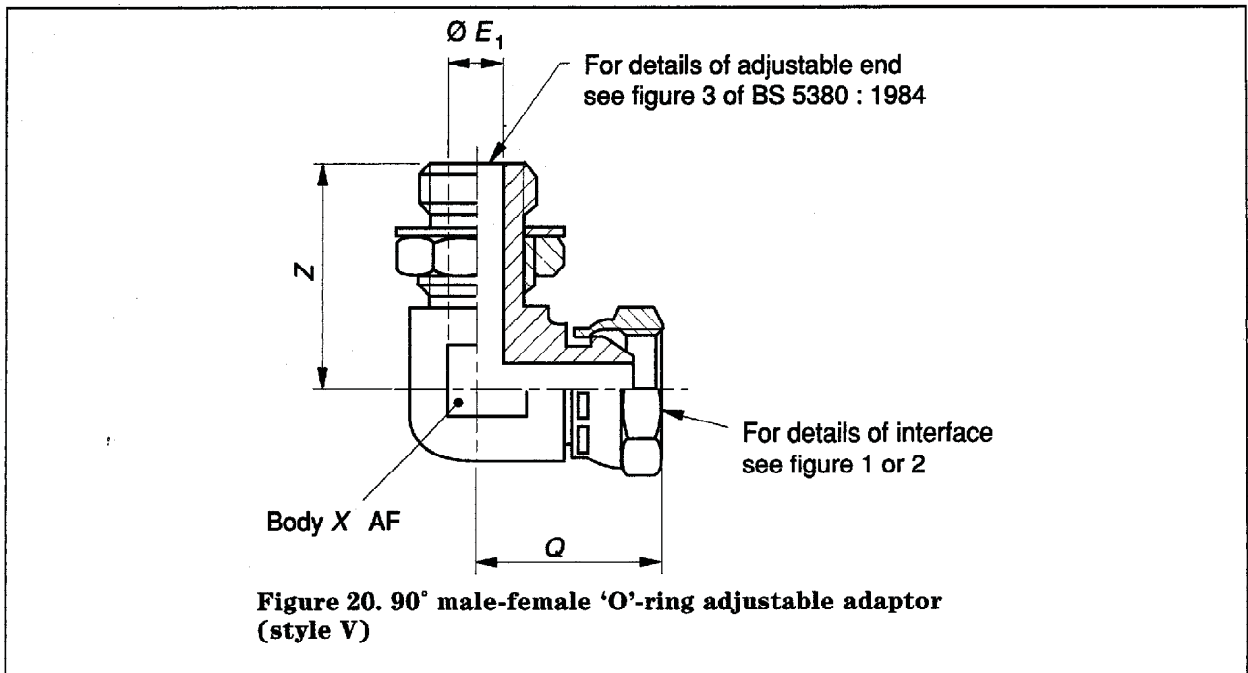


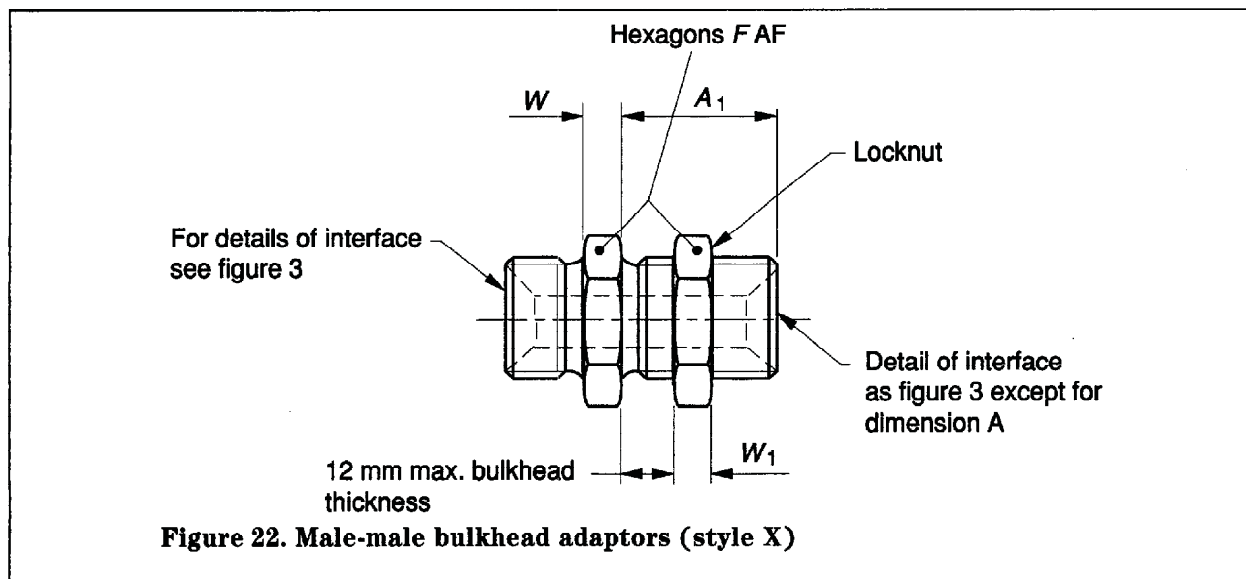
Table 8. Dimensions of male-female 'O'-ring adjustable adaptors

| Thread designation | E_1 max. mm | Q mm | Z mm | Q_1 mm | Z_1 mm | X nom. mm | 'O'-ring ref. no. mm |
|---------------------|------------------|-----------|-----------|-------------|-------------|----------------|-------------------------|
| Tolerances | | | | | | | |
| | | 0 -3 | +3.0 0 | 0 -3 | +3.0 0 | | |
| G 1/8 | 3.5 | 28 | 22.0 | 23 | 20.0 | 17 | 0081-16 |
| G 1/4 | 4.7 | 30 | 27.6 | 25 | 25.4 | 17 | 0101-24 |
| G 3/8 | 7.9 | 35 | 32.9 | 29 | 29.2 | 22 | 0136-24 |
| G 1/2 | 11.1 | 39 | 42.0 | 32 | 37.2 | 24 | 0176-24 |
| G 5/8 ¹⁾ | 14.3 | 47 | 43.5 | 39 | 38.4 | 27 | 0195-30 |
| G 3/4 | 16.7 | 50 | 51.3 | 40 | 44.0 | 32 | 0225-30 |
| G 1 | 22.2 | 55 | 54.2 | 45 | 47.1 | 41 | 0295-30 |
| G 1 1/4 | 28.6 | 61 | 62.9 | 46 | 55.0 | 50 | 0365-30 |
| G 1 1/2 | 33.3 | 72 | 66.1 | 58 | 58.2 | 55 | 0425-30 |
| G 2 | 46.0 | 94 | 82.5 | 73 | 76.5 | 70 | 0545-30 |

NOTE. These adaptors are suitable for assembly with ports in accordance with BS 5380.

¹⁾ Described in BS 2779 as a non-preferred size.

²⁾ In accordance with BS 4518.



| Table 9. Dimensions of male-male bulkhead adaptors | | | | |
|---|-------------------|-----------|-----------|----------------|
| Thread designation | A ₁ | F nom. | W | W ₁ |
| | mm | mm | mm | mm |
| | Tolerances | | | |
| | | | +0.5 0 | +0.5 0 |
| G ¼ | 28 | 14 | 5 | 5 |
| G ¼ | 28 | 19 | 7 | 6 |
| G ¾ | 32 | 22 | 8 | 7 |
| G ½ | 35 | 27 | 10 | 8 |
| G ¾ ¹⁾ | 35 | 30 | 12 | 8 |
| G ¾ | 38 | 32 | 12 | 9 |
| G 1 | 41 | 41 | 15 | 10 |
| G 1¼ | 44 | 50 | 19 | 13 |
| G 1½ | 48 | 55 | 23 | 15 |
| G 2 | 48 | 70 | 29 | 15 |

¹⁾ Described in BS 2779 as a non-preferred size.

| Table 10. Maximum working pressures | | | |
|--|----------------------|---|---|
| Thread designation | Hose i.d. nom. mm | Working pressure max. bar ¹⁾ | Comments |
| G ¼ | 5.0 | 350 | Pressure corresponds with rating for type 2 hose in accordance with BS 3832 |
| G ¼ | 6.3 | 775 | Pressures correspond with ratings for type 4 hoses in accordance with BS 4586 |
| G ¾ | 10.0 | 690 | |
| G ½ | 12.5 | 515 | |
| G ¾ | 16.0 | 480 | |
| G ¾ | 19.0 | 430 | |
| G 1 | 25.0 | 345 | Pressure corresponds with rating for type 5 hose in accordance with BS 4586 |
| G 1¼ | 31.5 | 345 | Pressures correspond with ratings for type 7 hoses in accordance with BS 4586 |
| G 1½ | 38.0 | 345 | |
| G 2 | 51.0 | 345 | |

¹⁾ 1 bar = 10⁵ N/m² = 10⁵ Pa.

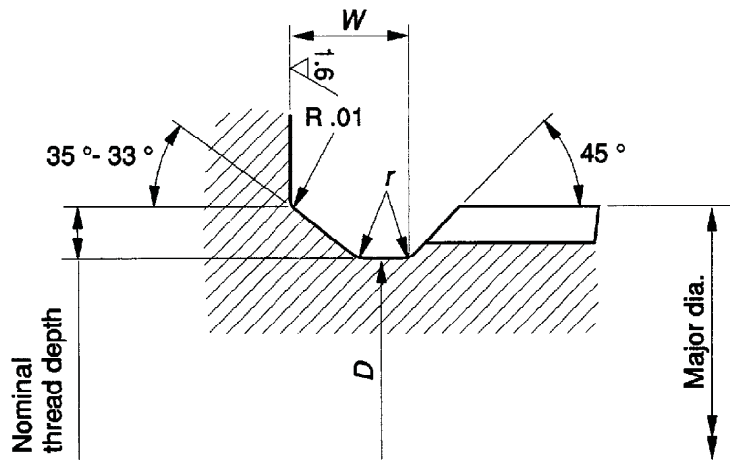


Figure 23. Preferred thread undercut details for bonded washer type seals

Table 11. Preferred thread undercuts for male adaptors when used as stud fittings with bonded washer type seals

| Thread designation | Major dia. mm | D mm | r mm | W max. mm |
|---------------------|------------------|----------------|------|-----------|
| G 1/8 | 9.728 9.514 | 8.25 8.00 | 0.50 | 2.54 |
| G 1/4 | 13.157 12.907 | 11.18 10.92 | 0.76 | 3.81 |
| G 3/8 | 16.662 16.412 | 14.60 14.30 | 0.76 | 3.81 |
| G 1/2 | 20.955 20.671 | 18.29 17.98 | 1.0 | 4.82 |
| G 5/8 ¹⁾ | 22.911 22.627 | 20.19 19.89 | 1.0 | 4.82 |
| G 3/4 | 26.441 26.157 | 23.75 23.42 | 1.0 | 4.82 |
| G 1 | 33.249 32.889 | 29.97 29.59 | 1.0 | 5.84 |
| G 1 1/4 | 41.910 41.550 | 38.61 38.23 | 1.0 | 5.84 |
| G 1 1/2 | 47.803 47.443 | 44.45 44.07 | 1.0 | 5.84 |
| G 2 | 59.614 59.254 | 56.26 55.88 | 1.0 | 5.84 |

¹⁾ Described in BS 2779 as a non-preferred size.

List of references (see clause 2)

Normative references

BSI publications

BRITISH STANDARDS INSTITUTION, London

| | |
|-------------------------|--|
| BS 1134 | <i>Assessment of surface texture</i> |
| BS 1134 : Part 1 : 1988 | <i>Methods and instrumentation</i> |
| BS 1936 | <i>Undercuts and runouts for screw threads</i> |
| BS 1936 : Part 1 : 1952 | <i>Inch screw threads</i> |
| BS 2779 : 1986 | <i>Specification for pipe threads for tubes and fittings where pressure-tight joints are not made on the threads (metric dimensions)</i> |
| BS 3832 : 1991 | <i>Specification for wire reinforced rubber hoses and hose assemblies for hydraulic installations</i> |
| BS 4368 | <i>Compression couplings for tubes</i> |
| BS 4368 : Part 1 : 1972 | <i>Specification for heavy series couplings (metric)</i> |
| BS 4368 : Part 3 : 1974 | <i>Specification for light series couplings (metric)</i> |
| BS 4518 : 1982 | <i>Specification for metric dimensions of toroidal sealing rings ('O'-rings) and their housings</i> |
| BS 4586 : 1992 | <i>Specification for spiral wire reinforced rubber covered hydraulic hoses and hose assemblies</i> |
| BS 5327 : 1976 | <i>Specification — Swept elbow bends for fluid power applications</i> |
| BS 5380 : 1984 | <i>Specification for hydraulic port and stud coupling using 'O'-ring sealing and 'G' series fastening threads</i> |

Informative references

Other publications

ANSI/SAE J 517 Hydraulic hose.

(Available from the Society of Automotive Engineers Inc., 2 Pennsylvania Plaza, New York, NY.10001, USA.)

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