

INTERNATIONAL  
STANDARD

**ISO**  
**7311**

Second edition  
1993-07-15

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**Diesel engines — Heads for fuel filters with  
vertical flange — Mounting and  
connecting dimensions**

*Moteurs diesels — Têtes pour filtres à combustible à bride verticale —  
Dimensions de montage et de raccordement*



Reference number  
ISO 7311:1993(E)

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 7311 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Sub-Committee SC 7, *Injection equipment and filters for use on road vehicles*.

This second edition cancels and replaces the first edition (ISO 7311:1984), of which it constitutes a technical revision.

Annex A of this International Standard is for information only.

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# Diesel engines — Heads for fuel filters with vertical flange — Mounting and connecting dimensions

## 1 Scope

This International Standard specifies the mounting and connecting dimensions for heads for fuel filters with vertical flange for diesel (compression-ignition) engines.

Unless otherwise specified, the filter heads apply to bolt-on filters, and spin-on filters according to ISO 7654 having a canister outside diameter of up to 80 mm. In special cases, canisters with an outside diameter of up to 88 mm may be mounted to these heads.

## 2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7654:1991, *Road vehicles — Spin-on fuel filters for compression-ignition engines — Mounting and connecting dimensions.*

## 3 Dimensions and tolerances

NOTE 1 Features such as threads or bolts for use with the filters are omitted from the figures. The current size for fitment of filters is M16 × 1,5.

### 3.1 Bolt holes for flanges of single and double filters

See figure 1.

NOTE 2 Engine manufacturers are encouraged to use a centre-to-centre distance for fixing holes or fixing bolts of  $50 \text{ mm} \pm 0,5 \text{ mm}$ .

Dimensions in millimetres

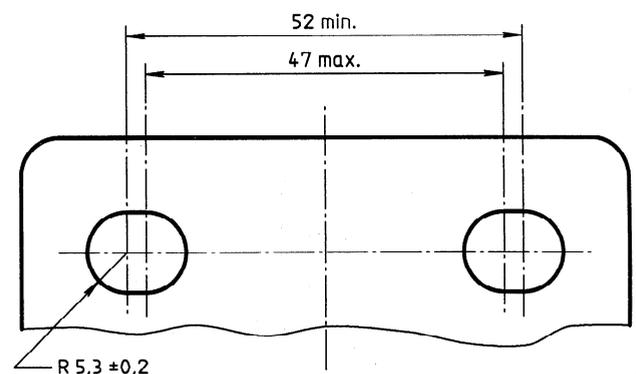


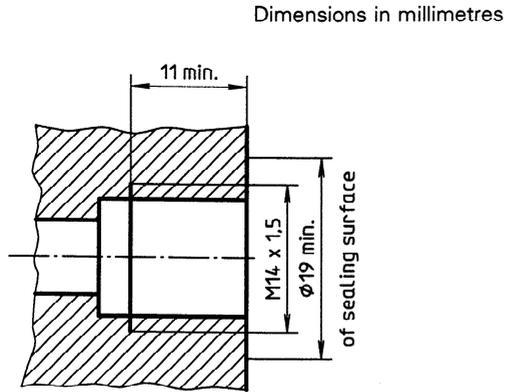
Figure 1

**3.2 Filter inlet and outlet ports**

**3.2.1 For outside sealing**

See figure 2.

NOTE 3 The choice of vent threads and overflow values are left to the manufacturer.

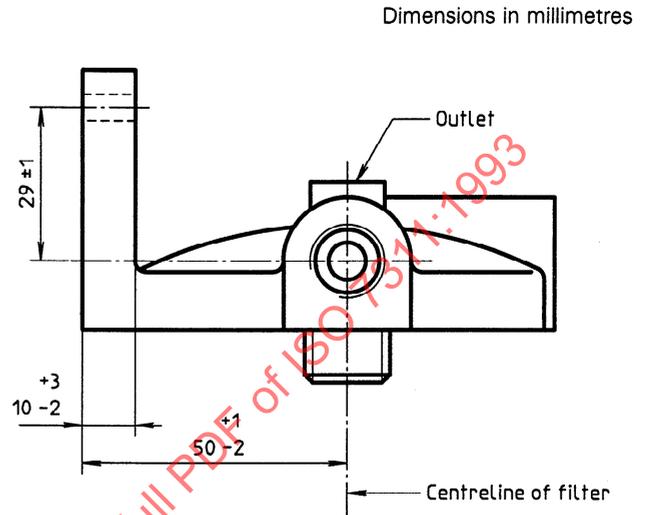


**Figure 2**

**3.3 Positioning of inlet and outlet ports relative to fixing face of flange**

**3.3.1 Single spin-on filters with vertical outlet and three horizontal ports**

See figure 4.



**Figure 4**

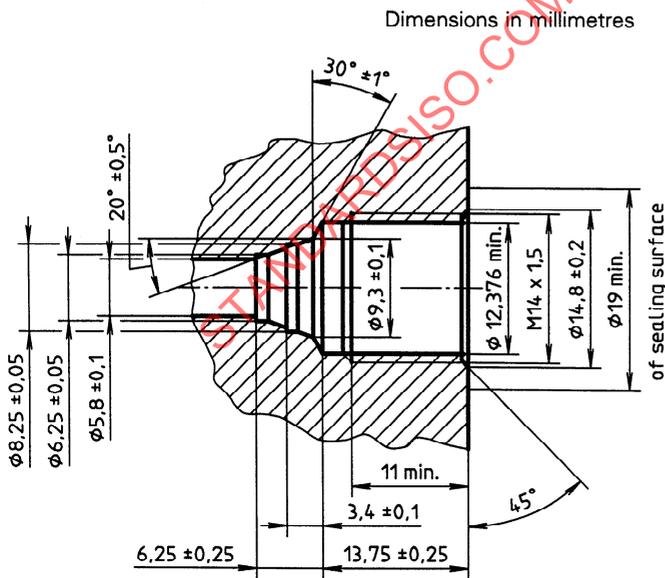
**3.2.2 For internal sealing**

See figure 3.

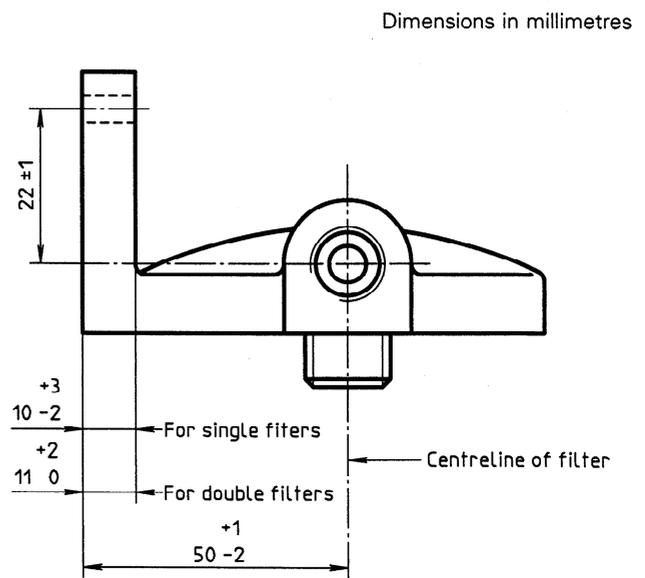
NOTE 4 The choice of vent threads and overflow valves are left to the manufacturer.

**3.3.2 Single and double filters without vertical outlet with two horizontal ports**

See figure 5.



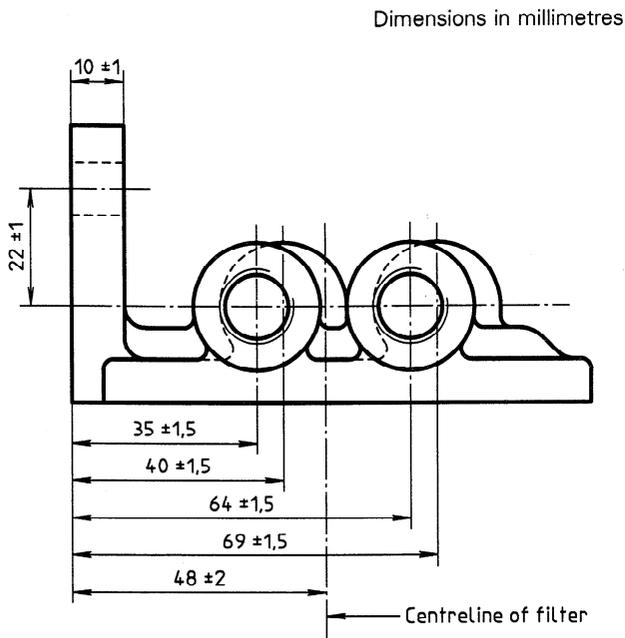
**Figure 3**



**Figure 5**

**3.3.3 Single filters with four horizontal ports and a flange of 10 mm ± 1 mm thickness**

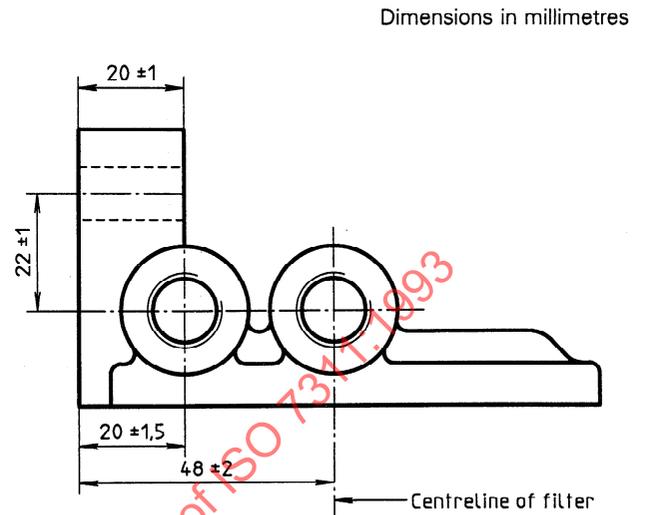
See figure 6.



**Figure 6**

**3.3.5 Double filters with four horizontal ports**

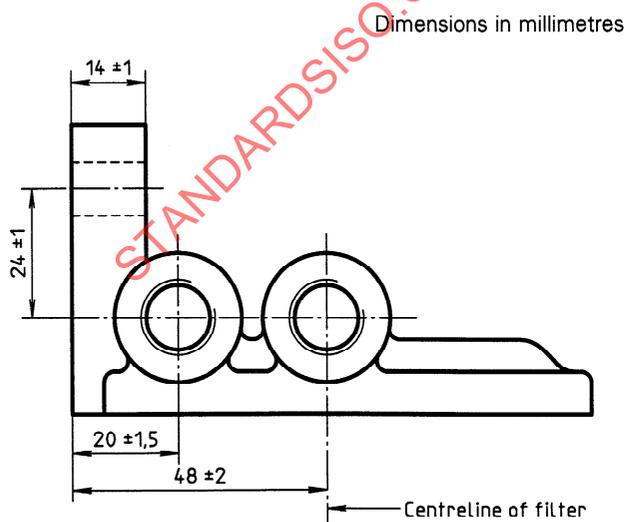
See figure 8.



**Figure 8**

**3.3.4 Single filters with four horizontal ports and a flange of 14 mm ± 1 mm thickness**

See figure 7.

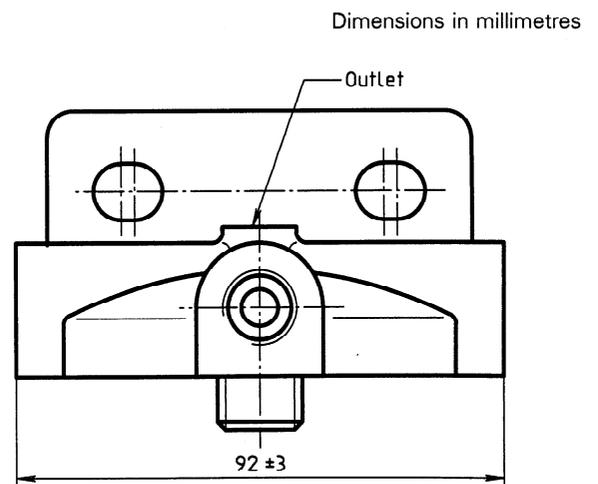


**Figure 7**

**3.4 Overall dimensions between sealing surfaces of horizontal ports**

**3.4.1 Single spin-on filters with vertical outlet and three horizontal ports**

See figure 9.

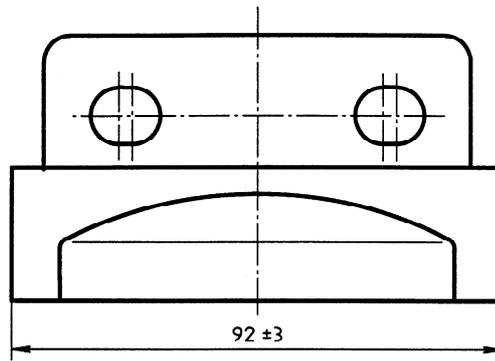


**Figure 9**

**3.4.2 Single filters without vertical outlet with two horizontal ports**

See figure 10.

Dimensions in millimetres

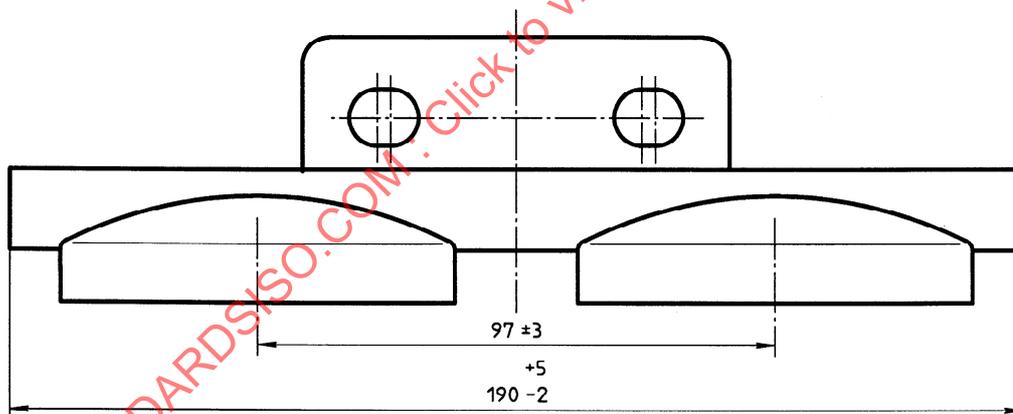


**Figure 10**

**3.4.3 Double filters**

See figure 11.

Dimensions in millimetres



**Figure 11**

### 3.4.4 Double spin-on filters

See figure 12.

Dimensions in millimetres

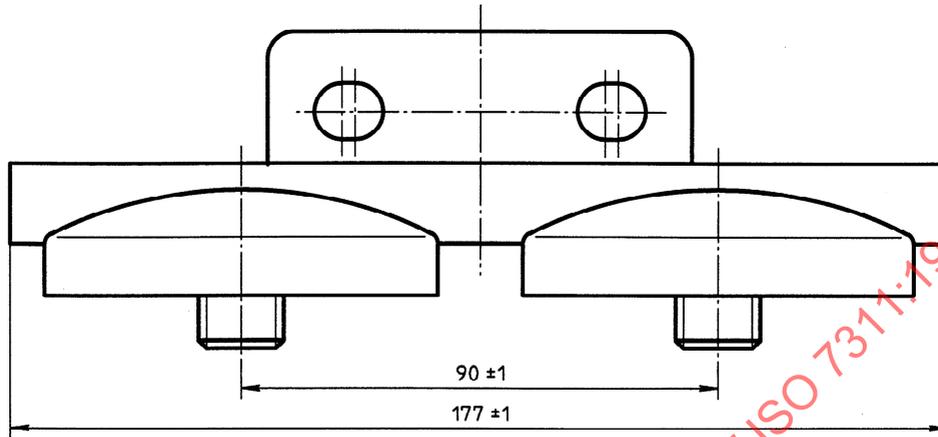


Figure 12

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**Annex A**  
(informative)

**Bibliography**

- [1] ISO 7310:1993, *Diesel engines — Heads for spin-on fuel filters with horizontal flange — Mounting and connecting dimensions.*
- [2] ISO 7576:1990, *Road vehicles — Two-stage fuel filters for compression-ignition engines — Mounting and connecting dimensions.*
- [3] ISO 7577:1982, *Road vehicles — Heads for fuel filters with vertical flange and three bolt fixing for compression ignition engines — Mounting and connecting dimensions.*
- [4] ISO 7774:1984, *Road vehicles — Compression ignition engines — Single fuel filters with horizontal flange and centre bolt fixing — Mounting and connecting dimensions.*

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