
**Road vehicles — Spin-on fuel filters for
diesel engines — Mounting and connecting
dimensions**

*Véhicules routiers — Filtres à combustible vissés pour moteurs diesels —
Dimensions de montage et de raccordement*



Foreword

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International Standard ISO 7654 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 7, *Injection equipment and filters for use on road vehicles*.

This third edition cancels and replaces the second edition (ISO 7654:1991), which has been technically revised.

Annex A forms an integral part of this International Standard. Annex B is for information only.

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Road vehicles — Spin-on fuel filters for diesel engines — Mounting and connecting dimensions

1 Scope

This international Standard specifies the mounting and connecting dimensions for spin-on fuel filters, with and without an inner sealing, to be used with diesel (compression-ignition) engines.

The preferred design of spin-on fuel filters are those without an inner sealing, and they are specified in clause 2. The alternative filter design is specified in annex A and should be used if an inner sealing is required.

The corresponding filter heads are specified in ISO 7310, ISO 7311 and ISO 7577 (see annex B).

2 Dimensions and tolerances

Details not specified in this International Standard are left to the manufacturer's choice.

2.1 The dimensions and tolerances of the filter shall be in accordance with figure 1.

The shape of the sealing ring shown in X shall be such that effective sealing is ensured. The dimensions of the compressed sealing ring shall be within the sealing surface shown in figure 2.

The dimension 0,5 mm min. shown in X shall be measured after tightening the filter in accordance with the filter manufacturer's recommendations. In cases where moulded sealing rings are used, this dimension may be 0; i.e., metal contact between the sealing surface to which the filter is attached and the face of the spin-on filter is allowed. This special design shall be identified on the filter with necessary fitting instructions.

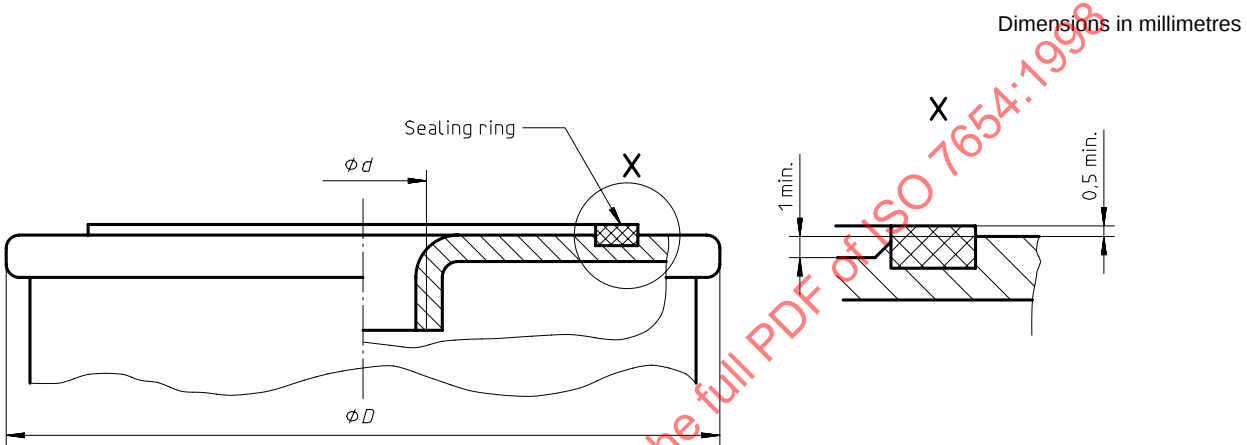
2.2 The dimensions and tolerances of the sealing surface and connecting thread shall be in accordance with figure 2.

3 Marking

Spin-on fuel filters may optionally be marked as follows:

- a) designation of filter type: diesel fuel filter;
- b) size of connecting thread, for example, M16 × 1,5;
- c) instructions for installation.

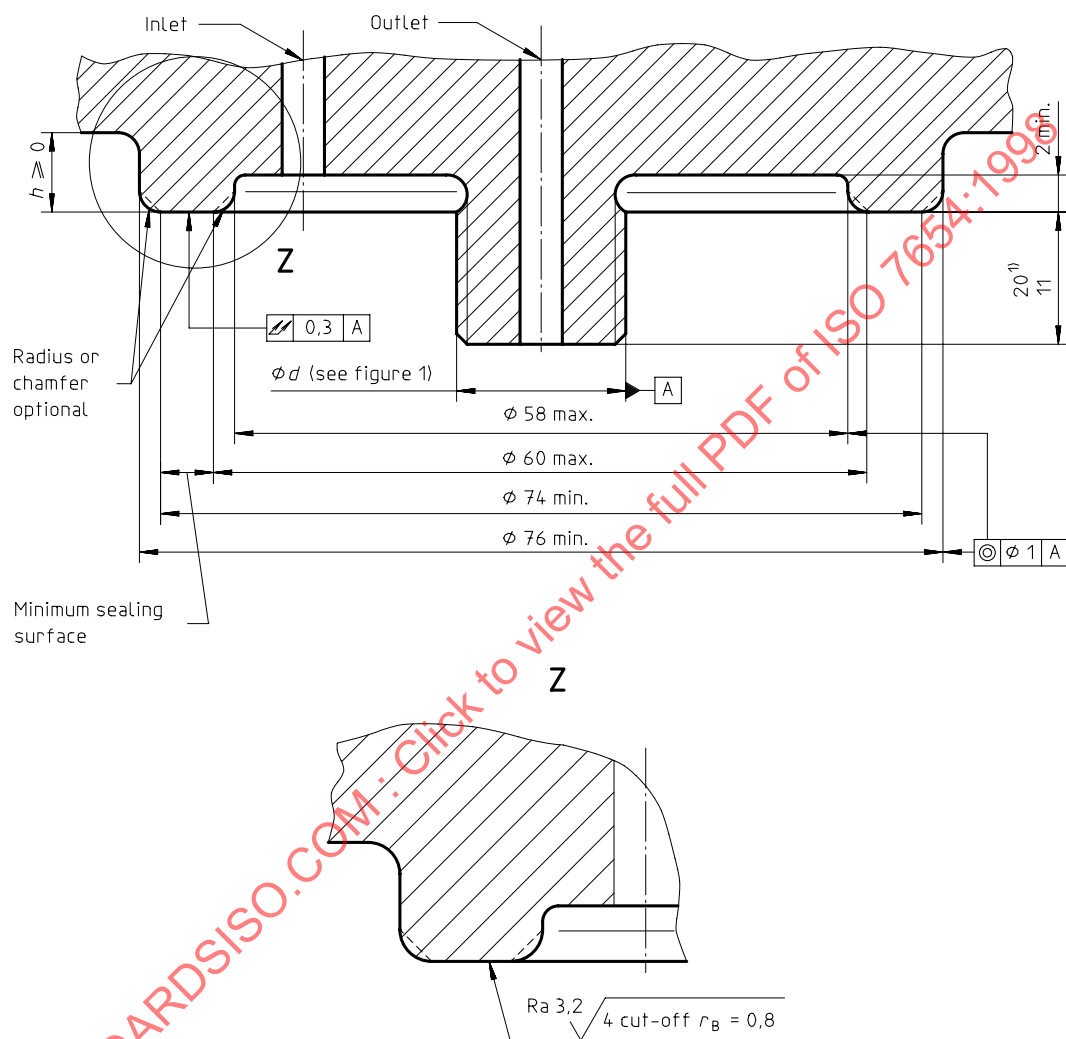
The appearance and position of this marking on the filter body are left to the discretion of the manufacturer.



Size	D	d
1	$D \leq 80$	M16 $\times$ 1,5
2	$80 < D \leq 88$	
3	$88 < D \leq 100$	M16 $\times$ 1,5 or M24 $\times$ 1,5
4	$100 < D \leq 112$	

Figure 1 — Dimensions of filter

Dimensions in millimetres
Surface roughness values in micrometres



- 1) The thread length shall be adequate to ensure a satisfactory seal between the filter and the sealing surface.

Figure 2 — Dimensions of sealing surface and connecting thread

Annex A (normative)

Spin-on filters with inner sealing

In cases where an additional sealing ring (inner sealing) at the connecting thread is required, the alternative design shown in figure A.1 and A.2 should be used by mutual agreement between manufacturer and user.

All other dimensions and specifications not shown in figure A.1 and A.2 are in accordance with figures 1 and 2 respectively.

The free height of sealing ring shown in figure A.1 shall be at the discretion of the manufacturer, depending on material and shape.

The shape of the sealing rings shall be such that effective sealing is ensured. The dimensions of the compressed inner sealing ring shall be within the sealing surface shown in figure A.2.

Filter and sealing rings shall be so joined as to necessitate the replacement of all three parts simultaneously.

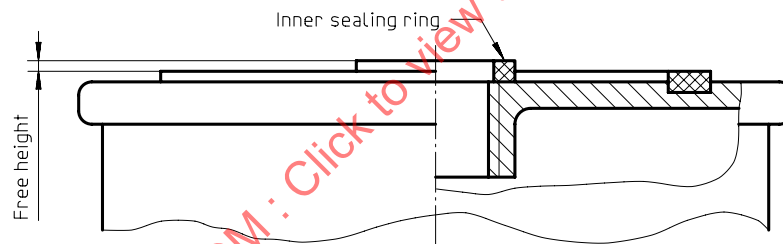
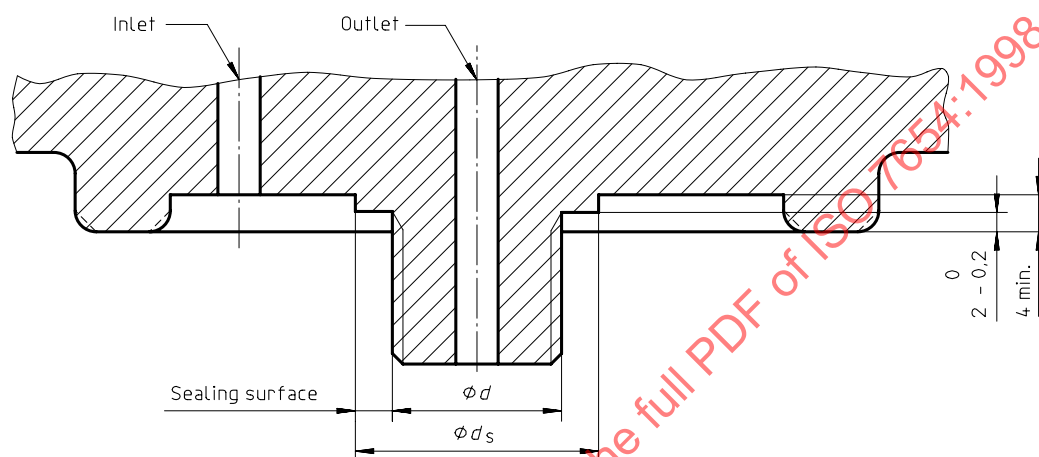


Figure A.1 — Dimensions of filter with inner sealing

Dimensions in millimetres



d	d_s
M16 $\times$ 1,5	22,5 max.
M24 $\times$ 1,5	30,5 max.

Figure A.2 — Dimensions of sealing surface and connecting thread with inner sealing

Annex B

(informative)

Bibliography

- [1] ISO 7310:1993, *Diesel engines — Heads for spin-on fuel filters with horizontal flange — Mounting and connecting dimensions.*
- [2] ISO 7311:1993, *Diesel engines — Heads for fuel filters with vertical flange — Mounting and connecting dimensions.*
- [3] ISO 7577:1982, *Road vehicles — Heads for fuel filters with vertical flange and three bolt fixing for compression engines — Mounting and connecting dimensions.*

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