INTERNATIONAL STANDARD

ISO 6415

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Internal combustion engines — Spin-on filters for lubricating oil — Dimensions

Moteurs à combustion interne — Filtres à huile vissés — Dimensions

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 6415 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 6415:1990), which has been technically revised.

Internal combustion engines — Spin-on filters for lubricating oil — Dimensions

1 Scope

This International Standard specifies the essential dimensions necessary for interchangeability of spin-on filters of the full-flow type for the filtration of lubricating oil for internal combustion engines. It also gives the designation and marking of these filters.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 68 (all parts), *ISO general purpose screw threads — Basic profile*

ISO 261, *ISO general purpose metric screw threads — General plan*

ISO 965-1, *ISO general-purpose metric screw threads — Tolerances — Part 1: Principles and basic data*

ISO 965-3, *ISO general purpose metric screw threads — Tolerances — Part 3: Deviations for constructional screw threads*

3 Requirements

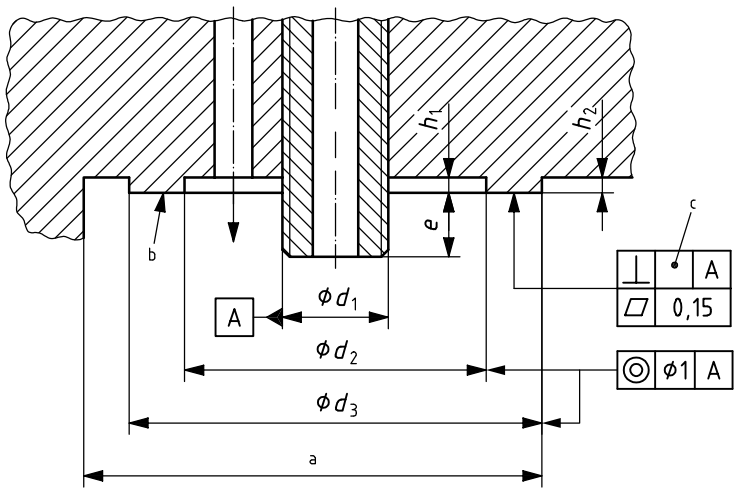
3.1 Connection thread and sealing surface

The dimensions of the male and female connection threads and of the sealing surface are specified in Figure 1 and Table 1. The thread shall conform to ISO 68, ISO 261, ISO 965-1 and ISO 965-3.

The sealing surface shall be continuous and free from porosity and nicks.

NOTE The use of filters with unified threads is discouraged to avoid the danger of mismatching.

Dimensions in millimetres unless otherwise specified



[a] Minimum clearance = filter diameter K + 20 mm

[b] Sealing surface Ra = 3,2 µm. Mean value measured at minimum wave length C = 0,8 mm and the overall distance l_m = 4 mm

[c] Socket sizes 1 and 2: 0,2. Socket sizes 3 and 4: 0,3.

Figure 1 — Connection and sealing surface

Table 1 — Dimensions of connection threads and sealing surface

Dimensions in millimetres

Socket size	Connection thread					Sealing surface			
	d_1	Tolerance		e		d_2	d_3	h_1	h_2
		stud thread [a]	filter thread	min.	max.	max.	min.	min.	min.
0	M20x1,5	6g	6H	14	20	54	69	2	2
1	M20x1,5	6g	6H	14	20	58	76	2	2
2	M26x2	6g	6H	14	20	58	76	2	2
3	M30x2	6g	6H	16	22	90	113	4	2
4	M38x2	6g	6H	16	22	90	113	4	2

[a] The stud shall be threaded over full distance e. When the filter has been tightened, at least three full threads shall be in contact.

NOTE M16 × 1,5 and M24 × 1,5 have been reserved for spin-on fuel filters.