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Flywheel housings for reciprocating internal combustion engines — Nominal dimensions and tolerances

Carter de volant moteur pour moteurs alternatifs à combustion interne — Dimensions nominales et tolérances

Reference number
ISO 7648 : 1987 (E)

Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7648 was prepared by Technical Committee ISO/TC 22, *Road vehicles.*

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Flywheel housings for reciprocating internal combustion engines — Nominal dimensions and tolerances

1 Scope and field of application

This International Standard specifies the nominal dimensions and tolerances of flywheel housings for reciprocating internal combustion engines, in particular those which affect interchangeability with mating parts.

It applies to reciprocating internal combustion engines except engines for aircraft and passenger cars.

Flywheel housings of size codes 1 to 4 are recommended for commercial vehicles and buses.

2 References

ISO 273, *Fasteners — Clearance holes for bolts and screws.*

ISO 1101, *Technical drawings — Geometrical tolerancing — Tolerancing of form, orientation, location and run-out — Generalities, definitions, symbols, indications on drawings.*

ISO 7649, *Commercial vehicles — Clutch housings for internal combustion engines — Nominal dimensions and tolerances.*[1)]

3 Nominal dimensions and tolerances

3.1 Flywheel housing

See figure 1 and table 1.

1) At present at the stage of draft.

Table 1 — Flywheel housing dimensions and tolerances

Dimensions in millimetres

Size code	A nom.	A tol.	Run-out (assembled flywheel housing) t	B nom.	D* min.
02	1 245	+ 0,25 0	not applicable	1 400	10
01	1 010,00	+ 0,25 0		1 165	10
00	787,40	+ 0,25 0	0,47	883	8
0	647,70	+ 0,25 0	0,39	711	8
1/2	584,20	+ 0,20 0	0,35	648	8
1	511,18	+ 0,13 0	0,31	553	8
2	447,68	+ 0,13 0	0,27	489	8
3	409,58	+ 0,13 0	0,25	451	8
4	361,95	+ 0,13 0	0,25	404	8
5	314,32	+ 0,13 0	0,25	356	8
6	266,70	+ 0,13 0	0,25	308	8

* Dimension D relates to flywheel housings without rubber sealing. However, this dimension may be increased if a rubber seal is necessary.

NOTE — Run-out tolerances t shall be measured on the assembled engine mounted on its supports in accordance with the annex. (See ISO 1101 for definition of run-out.)

Dimensions in millimetres

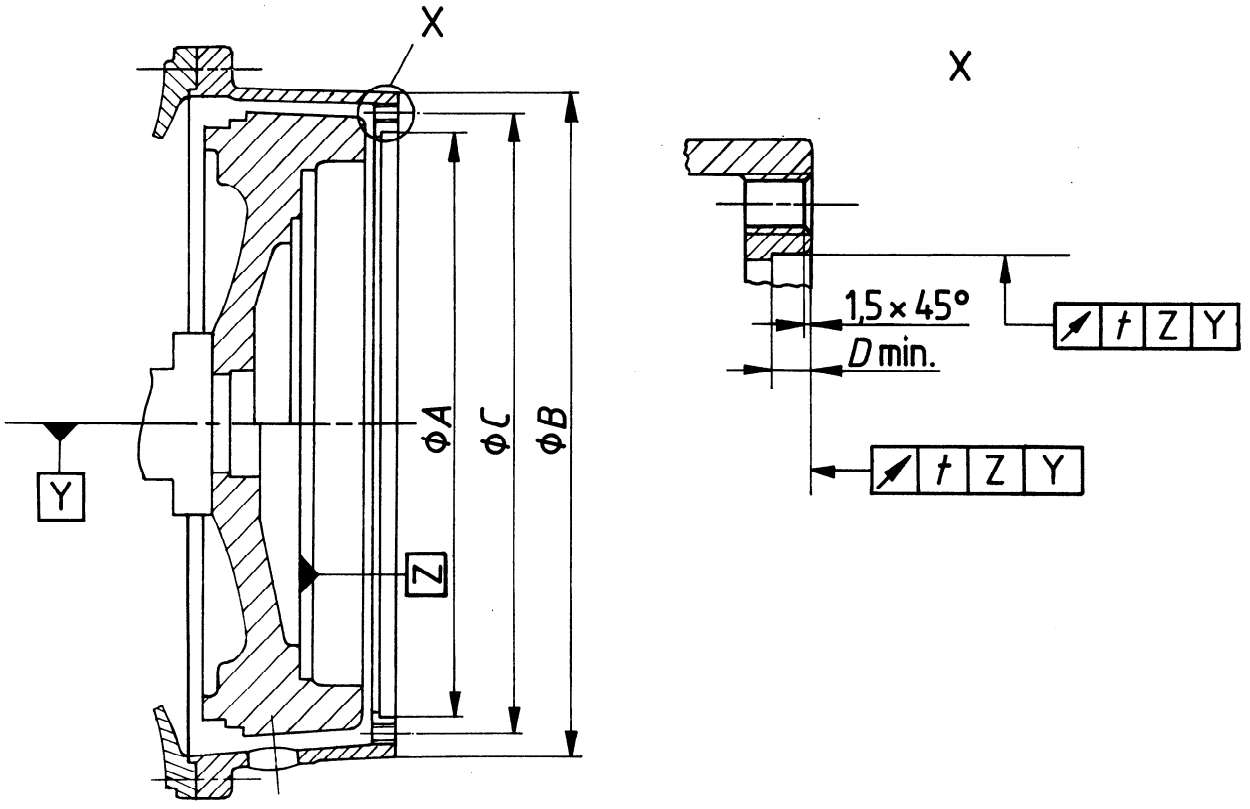


Figure 1 — Flywheel housing

3.2 Bolt or screw spacing and size

3.2.1 Dimensions and tolerances

See figure 1 and table 2.

Table 2 — Tapped holes and bolt or screw spacing and dimensions

Size code	Tapped holes		Recommended thread engagement		C nom. mm (see figures 1 and 2)
	Number	Size	For cast iron flywheel housing 1,5 × ø nom. of bolt or screw	For aluminium flywheel housing 2 × ø nom. of bolt or screw	
02	24	M16			1 340,00
01	24	M16			1 105,00
00	16	M12			850,90
0	16	M12			679,45
1/2	12	M12			619,12
1	12	M10*			530,22
2	12	M10			466,72
3	12	M10			428,62
4	12	M10			381,00
5	8	M10			333,38
6	8	M10			285,75

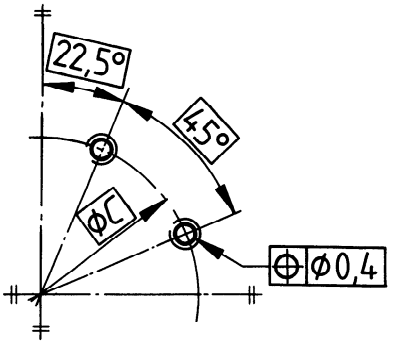
* M12 may be used for high engine torque applications.

NOTE — 24 tapped holes are optional for aluminium flywheel housings of size code 1.

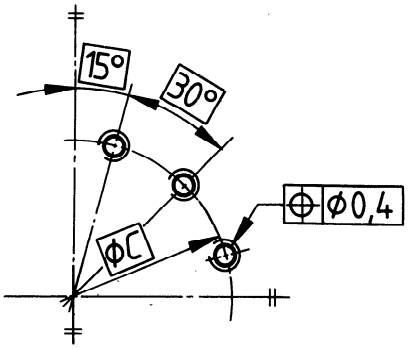
3.2.2 Spacing

Tapped holes shall be spaced equally on each side of the vertical and horizontal axis lines as shown in figure 2.

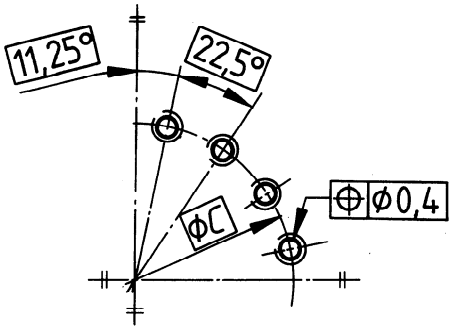
Dimensions in millimetres



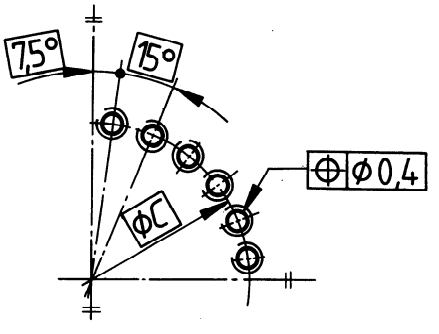
a) 8 tapped hole spacing



b) 12 tapped hole spacing



c) 16 tapped hole spacing



d) 24 tapped hole spacing

Figure 2 — Bolt or screw hole spacing